AXL.NET: WEB-ENABLED CASE METHOD INSTRUCTION FOR ACCELERATING TACIT KNOWLEDGE ACQUISITION IN LEADERS

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ABSTRACT

AXL.Net is a prototype web-based immersive technology solution that supports case method teaching for U.S. Army leader development. The AXL.Net system addresses three challenges: (1) designing a pedagogically-sound research prototype for leader development, (2) integrating research technologies with the best of Web 2.0 innovations to enhance case method teaching, and (3) providing an easy to use system. Initial evaluations show that the prototype application and framework is effective for leader development.

1. INTRODUCTION

With ongoing U.S. Army deployments into complex environments, there is an existing and ever growing need to accelerate the development of the Army's junior leaders. These junior leaders need to be developed to demonstrate effective leadership skills when facing situations they have never before experienced (Wong, 2004) and as quickly and efficiently as possible for the large number of leaders that the Army needs to develop.

Robert Sternberg and his colleagues (2000) studied the practical intelligence of military leaders – something they called tacit knowledge – and found that it fell into three broad categories: interpersonal tacit knowledge, intrapersonal tacit knowledge, and organizational tacit knowledge. Sternberg and others found that leaders gain expertise and tacit knowledge through experiences and reflecting on experiences (Hughes, Ginnett, & Curphy, 2002; McCall, Lombardo, & Morrison, 1988; Sternberg et al., 2000).

Case method teaching has been identified as a way to provide sense-making opportunities and is a widely recognized technique used in courses on leader development (e.g., Bass, 1990; Hays, 2005; Hughes, Ginnett & Curphy, 2002; Yukl, 2002). Students analyze a realistic case with the help of an instructor or facilitator to learn lessons from other experiences without having to live through the experience themselves.

The Army Excellence in Leadership (AXL) project, a collaboration between the University of Southern California's Institute for Creative Technologies (ICT) and the U.S. Army Research Institute (ARI), supports tacit knowledge acquisition in leaders, with focus on interpersonal tacit knowledge. One result of the AXL project is AXL.Net, a prototype web-based immersive technology solution that supports case method teaching for U.S. Army leader development.

The overarching design for AXL.Net was based on the traditional case method teaching approach (Corey, 1999; Gentile, 1990; Golich et al., 2000; Hill, Gordon & Kim, 2004):

1. Review learning objectives and be immersed in the case.
2. Familiarize with the basic story points – identify roles/responsibilities, story points, key events.
3. Critically analyze the case – consider stakeholder goals, cause/effect, alternate decisions.
4. Synthesize thoughts – develop rules of thumb, connect to personal experience/real situations.

The framework, however, required translation into an interactive, computer-based medium. Furthermore, the interactive medium along with the use of filmed cases provided opportunities for learning experiences that were not previously possible. These experiences needed to be invented for augmenting existing techniques or creating wholly new ones. Finally, theories about the acquisition of tacit knowledge needed to be incorporated into the design and approach.

2. AXL.NET DESIGN

Previously, ICT developed a fictional filmed case, *Power Hungry*, that was integrated with an interactive

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computer-based technology, Think Like a Commander—Excellence in Leadership (TLAC-XL) (Hill, Gordon, & Kim, 2004). Through evaluations by ARI as well as ICT's own analysis, there were a number of lessons learned from TLAC-XL:

Value of scenarios: TLAC-XL was inspired by the Think Like a Commander (TLAC) teaching approach (Shadrick & Lussier, 2004), but whereas TLAC focused on the tactical situation, the TLAC-XL concept expanded the scenario scope by considering the interpersonal aspects of leadership. The tactical scenario became the context for examining key leadership issues that influenced the outcome of a situation. Interleaving leadership issues with the tactical scenario enabled students to see how specific interpersonal skills can impact an operation. The *Power Hungry* case and TLAC-XL software were found to be memorable and engaging (Zbylut & Ward, 2004a), and the *Power Hungry* case has since been widely used in other instructional settings.

Need for scaffolding: TLAC-XL used a synthetic mentor in place of a human instructor counterpart. The synthetic mentor posed a series of highly structured questions related to the eight TLAC topics. The intent was to have the student think on their own and generate responses to the questions rather than selecting an answer from a menu. While the intent was appropriate—this is the expectation in the case method approach— the dialogue was one-way with the student generating analyses but not receiving feedback from the mentor, even as informed follow-up questions.

In addition to lessons learned from the TLAC-XL system, the AXL.Net design was informed by a number of considerations.

Case method teaching with film: In case method teaching, cases are provided to students so that they can develop tacit knowledge by vicariously reflecting on a situation. The case method analysis process includes evaluating the situation, the course of action, and the consequences. For the AXL framework, filmed cases were recognized as similar to the most effective text-based cases. Sternberg, et al., (2000) and Harvard Business School use text cases that are stories containing embedded leadership insights into tactical situations. Filmed narratives are capable of providing the same kind of stories. Some instructors already incorporate film into their classrooms for teaching concepts. United States Military Academy instructors often use film clips to serve as discussion points within their Military Leadership classes. A variety of instructors also have adopted the AXL *Power Hungry* scenario, along with the facilitator's guide (Zbylut & Ward, 2004b) that identifies the scenario's embedded leadership issues and provides suggested discussion questions, for use in their classrooms. An additional film, *Tripwire*, representing a fictional scenario in Iraq, was since completed in the course of the overall AXL project.

Interactive multimedia exercises: While AXL.Net supports text-based cases, one of its strengths is handling rich media content. The technologies developed to address this challenge include:

- The ability to search the movie: in some ways, similar to skimming the book and using the index.
- The ability to bookmark specific film references (See Figure 1): similar to making margin notes or highlighting the text.
- Character interviews: similar to interviewing "protagonists" of a case that come to a classroom to answer questions.

Enabling sense-making: Student participation in a discussion, reflection, and exposure to different points of view are found to help a student's sense-making process (Brown, Collins & Duguid, 1989; Golich, et al., 2000; Palus, et al., 2003). In traditional classroom-based case method teaching, a case method instructor typically leads a discussion through the use of questions (Gentile, 1990; Golich et al., 2000). This activity is not easily duplicated in a distance learning environment without an instructor. One solution in AXL.Net drew on the instructional design principles of guided analysis rather than pure discovery learning (Mayer, 2004). The system presented a deliberate set of questions authored to provide opportunities for reflection. The system also supported forced choice questions (e.g., multiple choice, true/false) that helped determine the state of the student and allowed feedback or branching that leads to tailored exercises or open-ended questions. For example, the system may ask whether a student has experience with the depicted situation and branch to a set of questions that depend on this answer. Another solution was the implementation of a critical issues tool. The tool asked the student to select and order from a master list the critical issues that affected the outcome of the cases. Based on the students' choices and rankings, the system provided the student with feedback about their choices that included drawing attention to the issues that they did not select.

AXL.Net provides different points of view through a virtual (though currently non-animated) facilitator, *CPT Stewart*, and peer responses. The system and modules were also designed for small groups of students to complete together, discussing the questions with each other, without an instructor. The character interview capability originally used in TLAC-XL was included and enhanced. Students were able to interview characters at any stage in the analysis to encourage consideration of the "backstory" and the different motivations of the characters. A mediation capability was integrated,

Fig. 1: The video bookmarking tool using a filmed case in AXL.Net.

providing "bridging" dialogue between a student's question and the available responses from a character (Gandhe, Gordon, & Traum, 2006). Interview clips were also integrated directly into the instruction.

Addressing the limitations of traditional approaches: One of the limitations of case method teaching has been the differences in the experience level of facilitators (Golich et al., 2000). The AXL.Net system allows expert case method teachers to develop online modules that can then be accessed and used by other instructors. As previously described, an "expert" facilitator was embedded within the system to provide guidance and feedback, and AXL.Net supports branching and other tailoring of the system.

Another limitation of case method teaching has been how well interpersonal issues can be depicted in a paper-based case. By presenting the case with film, students can experience interpersonal situations and conflicts very similar to real life: in real-time, with many other distractions, not knowing what comes next, not being able to easily skim, and observing body language and other non-verbal indicators to read the subtext. Using films as cases also addresses the inaccessibility of text-based cases (Kutner, Greenburg & Baer, 2005), allowing students to engage with other media besides text.

Leveraging Web 2.0 innovations: AXL.Net takes advantage of the web, particularly for usability and Web 2.0 innovations. Core principles of Web 2.0 applications include dynamic user-generated content (remixability), lightweight data and service structures, and simple but rich user experiences (O'Reilly, 2005). By applying these core principles to the system infrastructure design as well as the user interface design, the result was a system that could be easily modified or extended. The system takes advantage of Asynchronous JavaScript and XML (AJAX) techniques to reduce load time and bandwidth requirements for the media-heavy AXL.Net. AXL.Net was also implemented as a dynamic content management system making authoring and customization of toolsets easier for both instructors and system developers. AXL.Net applies the transparent integration of media

formats, such as image file formats JPG, GIF, and BMP, as well as movie file formats for QuickTime and Windows Media, that is possible with the web. Finally,

and most critically, AXL.Net was structured to maximize innovation opportunities for its users. AXL.Net is designed for two different users: the students who learn from the teaching modules and the content creators who author modules. AXL.Net is not tied to specific modules or cases, allowing users to "remix" their own content.

3. EVALUATION METHOD

In the first half of 2006, ARI conducted initial pilot tests with a cultural awareness module for the *Tripwire* case that used the AXL.Net system and framework described above. Forty-four captains (CPTs), six first lieutenants (1LTs), and five second lieutenants (2LTs) from three U. S. Army installations completed the module. Of the officers, 12 had deployed twice to the Middle East, 30 had deployed once to the Middle East, and 13 had not deployed to either Iraq or Afghanistan.

Each officer participated in an AXL session typically consisting of two to four individuals. Officers watched *Tripwire* as a group on a laptop computer and then independently completed a set of measures. After completing the measures, officers began the interactive phase of the cultural awareness module. The module consisted of a series of open-ended and close-ended questions to prompt discussion about the cultural issues in *Tripwire*, particularly concerning the treatment of locals, managing the perceptions of locals, and dealing with IEDs in an urban environment. Discussion lasted approximately 45 to 90 minutes. Upon completing the module, officers independently completed another set of measures. Descriptions of the measures are provided in subsequent paragraphs.

Affect. After watching the film, officers completed the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Officers indicated the extent to which they experienced 20 emotions while watching the film. The 20 items were anchored on a five-point scale ranging from "very slightly or not at all" (1) to "extremely" (5). Positive affect (α = .91) was the mean of 10 positive emotions, such as active, excited, and proud. Negative affect (α = .85) was the mean of 10 negative emotions, such as hostile, afraid, and distressed.

Reactions to the film. After completing the PANAS, officers completed 15 items that addressed reactions that they had to the film. These items were anchored on a 7-point scale ranging from "strongly disagree" (1) to "strongly agree" (7). Six items assessed how believable and complex the characters in the film were (character depth; α = .78) and four items assessed the degree to which officers felt involved in the film's storyline (α = .79). Survey items also assessed whether officers found the film confusing and realistic. Additionally, officers completed two items that assessed their preference for filmed case studies over traditional methods of instruction found in the Army. These items were, "In an educational context, I would rather watch a film like this than read a scenario," and "In an educational context, I would prefer to discuss a film like this than listen to a PowerPoint briefing."

Reactions to training. Officers completed 16 items about various reactions to the AXL system after they finished the cultural awareness module. Items were anchored on a 7-point scale ranging from "strongly disagree" (1) to "strongly agree" (7). Five items (global reactions, α = .80) assessed the perceived value of the AXL tool, ease of use, how informative the training was, how responsive the training was to the officer's educational needs, and how frustrating the training approach was (reverse-scored). Four items assessed whether officers believed that the cultural awareness module made them think (stimulated thinking, α = .75). Example items from the stimulated thinking scale included: "The questions included as part of the training made me think critically about issues in the scenario" and "The training made me think about the scenario in a different way than I usually would." Officers also completed four items that addressed their reactions to the character interview features of the AXL system (character interactivity, α = .81). A single item, "I can apply some of the things that I learned here to my activities as a leader," assessed whether officers believed they would transfer knowledge gained during the AXL module to their job (training applicability). Another item, "I wanted more feedback about how I was doing during the training modules," was used to determine whether officers wanted the AXL system to provide more feedback.

Emphasis on cultural issues. Officers completed a rank ordering task on paper that consisted of 21 actions that the fictional characters of the scenario could have performed differently during *Tripwire*. Eight of the actions were relevant to cultural issues presented in the cultural awareness module. Examples of cultural issues included, "*CPT Holston* should have refrained from shooting the backpack with the Koran," and "*1LT Porter* should have refrained from striking the second interpreter." An example of a non-cultural issue was "*CPT Holston* should have ensured that everyone had a common understanding of the mission and his intent."

Officers were told to select the top seven issues in the film and then rank them according to importance. Officers completed the rank-ordering task twice—once after watching the film (but before discussion) and once after discussion. This allowed the researchers to examine if

officers deemed the cultural issues to be more important after participating in discussion of the scenario.

Behavioral judgment. Officers completed eight items that asked them to choose between two courses of action that could have been taken during *Tripwire*. The forced-choice items represented a heterogeneous set of issues intentionally embedded in the case study, including maintaining one's health versus self-sacrifice for the mission, accomplishing the mission versus protecting one's Soldiers, listening to the advice of Soldiers versus maintaining command authority, and neutralizing potential IED threats versus offending Iraqi civilians. For each item, an officer received one point for selecting the better course of action (i.e., consistent with the teaching goals built into *Tripwire*). A behavioral judgment score was then computed by summing across the eight items. The behavioral judgment task was given before and after discussion of the scenario.

4. EVALUATION RESULTS

4.1 Trainee Reactions

Means and standard deviations for the variables are presented in Table 1. Results indicated that reactions to the film were positive, with officers rating the film as involving (M = 5.55, SD = 1.03) and characters as complex (M = 5.35, SD = .93). In general, officers tended to view *Tripwire* as realistic, although substantial variability existed among leaders (M = 4.96, SD = 1.71). Regardless of whether the film was perceived as realistic, officers overwhelmingly preferred watching a film to reading a scenario (M = 6.60, SD = .81) or listening to a PowerPoint presentation (M = 6.76, SD = .58).

Reactions to the training package as a whole also tended to be positive. Officers' global reactions to the training were positive (M = 5.64, SD = .84), and officers indicated that the cultural awareness module was thought provoking (M = 5.39, SD = .82). Likewise, officers indicated they could apply something that they learned during the module to their activities as a leader (M = 5.56, SD = 1.18). Officers were somewhat neutral with respect to whether they believed the AXL system should provide more feedback (M = 3.45, SD = 1.71), with some individuals wanting more feedback than others. The character interview features received slightly positive ratings (M = 4.53, SD = 1.23), but ratings suggest that some of the character functionality in the system needs improvement.

4.2 Learning

A paired-samples t-test was conducted to examine if discussing the film impacted how leaders prioritized the types of issues embedded in the film. Results indicated that officers placed stronger emphasis on cultural issues after participating in discussion (M = 3.11 issues, SD = 1.39) than they did before discussion (M = 2.64 issues, SD = 1.17), $t(35) = 2.50$, $p < .05$. These findings provide evidence that the cultural awareness module resulted in a conceptual shift in leaders' understanding of the cultural elements embedded in *Tripwire*, such that officers viewed cultural issues as significantly more important after having completing the AXL module.

A paired-samples t-test also was used to examine whether discussing the film resulted in better judgment by leaders. Results indicated that leaders tended to exhibit better judgment about behavioral courses of action after discussion (M = 5.08, SD = 1.30) than they did before discussion (M = 4.82, SD = 1.22), $t(54) = 2.08$, $p < .05$. Such findings suggest that completing the cultural awareness module impacted leaders' judgment in a way consistent with the teaching goals of *Tripwire*.

Table 1
Descriptive Statistics for Study Variables (N = 55)

	M	***SD***
Pre-Discussion Measures		
Positive Affect	3.03	.85
Negative Affect	1.82	.67
Character Depth	5.35	.93
Involving Film	5.55	1.03
Confused	1.78	.92
Realism	4.96	1.71
Preference for Film over Text Scenario	6.60	.81
Preference for Film over PowerPoint	6.76	.58
Emphasized Cultural Issues (T1) [a]	2.64	1.17
Behavioral Judgment Pretest	4.82	1.22
Post-Discussion Measures		
Global Training Reactions	5.64	.84
Stimulated Thought	5.39	.82
Character Interactivity	4.53	1.23
Training Applicability	5.56	1.18
Wanted Feedback	3.45	1.71
Emphasized Cultural Issues (T2) [a]	3.11	1.39
Behavioral Judgment Posttest	5.08	1.30

[a] N = 36; Task given at two of three installations.

4.3 Relationships between Emotions and Learning

Emotional measures correlated with some learning-relevant measures in this study (see Table 2). While negative affect was unrelated to behavioral judgment scores, positive affect was positively correlated with the behavioral judgment posttest score (r = .33, p < .05). Positive affect was not, however, correlated with the behavioral judgment pretest score (r = .10, p = *ns*), suggesting that positive affect experienced during the film may be related in some way to what an individual learns during the course of discussion. Both positive affect and negative affect were related to several learning-relevant reactions toward the training, specifically global reactions (positive affect: r = .43, p = .001), evaluations of how thought-provoking the training was (positive affect: r = .31, p < .05; negative affect: r = .44, p = .001), and whether leaders believed they learned anything that could be applied to their work (positive affect: r = .43, p = .001; negative affect: r = .31, p < .05).

The relationship between affect and emphasis on cultural issues was more difficult to interpret. Neither positive affect (r = .29, p = *ns*) nor negative affect (r = .22, p = *ns*) were significantly related to emphasis on cultural issues after the discussion. However, positive affect was significantly correlated with how much leaders emphasized cultural issues *prior* to discussion (r = .48, p < .01). Thus, leaders who experienced more positive affect during the film tended to focus their attention on culturally relevant courses of action before they engaged in discussion with other leaders, but the relationship between positive affect and emphasis on cultural issues was weaker after participating in discussion.

Table 2
Correlations between Affect and Learning (N = 55)

	Positive Affect	***Negative Affect***
Reactions to Training		
Global Training Reactions	.43**	.26
Stimulated Thought	.31*	.44**
Applicability	.42**	.31*
Wanted Feedback	.04	.01
Learning		
Behavioral Judgment Pretest	.10	.05
Behavioral Judgment Posttest	.33*	.13
Emphasized Cultural Issues (T1)[a]	.48**	.21
Emphasized Cultural Issues (T2)[a]	.29	.22

Note. * p < .05, ** p < .01. [a] N = 36.

5. Discussion

The results of this study indicated that the case study approach adopted in the AXL project and the AXL.Net system holds promise in shaping the knowledge and judgment of junior Army officers. Specifically, after completing the cultural awareness module, leaders exhibited better judgment about various behavioral courses of action that could have been adopted in the *Tripwire* scenario. The cultural awareness module also appeared to play a role in influencing the importance leaders placed on the cultural issues in the film, with leaders placing stronger emphasis on cultural issues after having completed the module. These findings are consistent with research on tacit knowledge that suggests individuals can build tacit knowledge by reflecting on their experiences and the experiences of others (Cianciolo, Anotonakis, & Sternberg, 2004; Matthew, Cianciolo, & Sternberg, 2005; Sternberg et al., 2000).

Findings with respect to reactions to *Tripwire* also were encouraging and consistent with those found for *Power Hungry* (Zbylut & Ward, 2004a; Zbylut, Mark, & Ward, 2005). Indeed, officers overwhelmingly indicated that they would prefer to watch a film rather than read a case study or listen to a PowerPoint presentation, both of which are common instructional techniques used in Army education. Such results suggest that film is an appropriate way for depicting case study material in AXL.Net.

Officers also responded positively to the overall AXL approach. Officers rated the cultural module as valuable and useful. More importantly, officers indicated that they would be able to transfer something that they learned to their activities as a leader. Furthermore, officers reported that the module was thought-provoking — not only compelling them to think about what makes a leader effective, but helping them to think about the *Tripwire* scenario in a different way than they usually would. Taken as a whole, this study's results support some of the basic tenets of case method teaching; namely, case method teaching challenges the assumptions of students and stimulates critical thinking (e.g., Crittenden, Crittenden, & Hawes, 1999; Jennings, 1996; Kreber, 2001; Richardson, 1994; Stewart & Dougherty, 1993).

Previous research regarding AXL indicated that the first film, *Power Hungry*, led to heightened emotional arousal and reports of positive affect (Zbylut & Ward, 2004a; Zbylut et al., 2005), and research from the present study suggests that, like *Power Hungry*, *Tripwire* is emotionally evocative. Results from the present study also found a positive relationship between positive affect and behavioral judgment posttest scores. Moreover, both positive affect and negative affect were related to several self-report measures indicative of learning—specifically, how much leaders reported that the training stimulated

thought and the extent to which leaders could transfer knowledge to the work environment. Due to the design of the study, it is unclear whether affect played a role in learning or was just a byproduct of the film medium. However, a growing body of work on mood, affect, and arousal support the notion that emotions play an integral role in learning. For example, Murray, Harish, Hirt, and Sujan (1990) found that individuals in positive moods demonstrated enhanced cognitive flexibility and had greater access to diverse and unusual information than individuals in neutral moods. Both cognitive flexibility (i.e., being able to identify similarities and differences between stimuli) and access to novel information would likely enhance case method discussion because they increase the probability that leaders would (1) bring unique perspectives to group discussion, and (2) be able to compare, contrast, and ultimately integrate those differing perspectives, resulting in new knowledge. Like positive affect, negative affect might play a productive role in learning from case studies because negative moods may trigger a desire to process information more deeply and to think more analytically (George, 2000; Sinclair, Mark, & Clore, 1994). The results of the present study are consistent with the proposition that negative affect is related to thinking; leaders who reported experiencing negative affect during the film also tended to report that the cultural awareness module was thought provoking.

In sum, the findings of this study are especially encouraging given that many of the officers participating had significant deployment experience, yet still appeared to learn something new from the AXL.Net module. Moreover, the AXL.Net system delivers an online format for conducting effective case method instruction without requiring intervention from an instructor. Such a format reduces demands on instructor time in the form of lesson preparation and helps to deliver interesting educational content in an online learning environment. The AXL system, however, is flexible with respect to allowing instructors to be as involved in instruction as they wish to be. While instructor involvement is not required to administer AXL modules, instructors can use AXL films to conduct their own class discussions around whatever topics they choose (Zbylut & Ward, 2004a, 2004b). Additionally, the finalized AXL.Net system will allow instructors to facilitate their classroom discussions or create their own online modules around either of the two existing films or new text-based or filmed case studies that they upload into AXL.Net's library.

Conceiving of and creating pedagogically-sound applications using new technologies and new approaches is a significant challenge, with methodologies in the educational design research community still relatively nascent (Collins, Joseph & Bielaczyc, 2004). The AXL project has attempted to bridge educational theories, a novel instructional approach leveraging the creative skills of filmmakers, and innovative technologies to create useful prototype applications for U.S. Army Soldiers. The positive results with AXL.Net indicate a significant and productive collaboration between ICT and ARI in addressing the design challenge and offer promise for future collaborations in immersive technologies for education and training.

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AXL.Net:

Web-Enabled Case Method Instruction for Accelerating Tacit Knowledge Acquisition in Leaders

Sponsored by
Army Research Institute &
U.S. Army RDECOM

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Learning Challenge

*"Leadership is **influencing people** by providing purpose, direction, and motivation while operating to accomplish the mission and improving the organization." -**U.S. Army Field Manual 6-22 on Leadership***

Expert leadership knowledge is largely *tacit*

- Acquired through **experience**
  - On the job training (McCall, Lombardo, Morrison, 1988)
  - Use simulators to 'learn by doing'
  - Rehearsals (e.g., Duffer's Drift)
- Transfer through **stories** (Gerrig, 1993; Klein, 1998; Sternberg, 2000)
- Experience alone is not enough
  - **Tutor effect** (Bloom, 1984)
  - **Reflection** is key to learning (Schon, 1982,1987; McCall et al., 1988; Chi et al., 2001)

AXL.Net Learning Environment

- **AXL case method approach**
  - Leadership and cultural issues in mission context
  - Using filmed stories as cases
  - Computer-based case analysis
- **Structured learning experience**
  - Guidance and feedback: to generate discussion and reflection
  - Interactive content and tools for “close watching”
  - Multiple delivery options: distributed and classroom learning
- **Open and flexible platform**
  - **Authorable**: Not tied to a single case or instructional module
  - Dynamic web technology infrastructure

Tripwire Clip

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AXL.net Online System

TOOLS

Tripwire: Cultural Awareness

Question Progress

Restart Course

This will hide your old answers and allow you to start over.

Course: Tripwire: Cultural Awareness

Module: CULTURAL AWARENESS

Cultural awareness is a critical skill for every warfighter, especially in today's COE. The challenge is that there is no single set of rules to follow in the cultural awareness arena.

Culture is a shared set of traditions, belief systems, and behaviors. Culture is shaped by history, religion, ethnic identity, language, and nationality. It evolves in response to many different pressures and influences. Culture is carefully learned through socialization and must be navigated with caution, understanding, and respect.

Note that Arab culture in particular is very rich and complex.

Back

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Tripwire: Cultural Awareness

Question Progress

Restart Course

This will hide your old answers and allow you to start over.

Course: Tripwire: Cultural Awareness

1. CPT Holston should have requested assistance from Battalion to support the VIP meeting.
2. 1LT Porter should have told CPT Holston about his personal problems.
3. CPT Holston should have taken action to let the town know that he would not tolerate insurgent activity.
4. CPT Holston should have disciplined 1LT Porter for striking Hazem in front of the interpreter.
5. CPT Holston should have kept Hazem under constant surveillance.
6. CPT Holston should have used a systematic approach for dealing with potential IEDs.
7. 1LT Porter should have refrained from striking the second interpreter.

Security-relevant Actions | Self-regulation Actions | Culturally-relevant Actions | Leadership Actions

Eight of the 21 courses of action are classified as culturally-relevant issues. The cultural issues reflect culturally aware decisions and actions that could influence Iraqi behavior and perceptions. As mentioned previously, many of these actions also appear in the Security-related Actions Category because many cultural and security issues are intertwined within the context of the scenario.

Your answers indicate that 5 of the seven items that you ranked as important belonged to the cultural category. Good job! Cultural issues are extremely important, not only in this fictional case study, but in real situations that Soldiers often encounter in Iraq. While you should continue to think about the cultural elements of the Tripwire scenario, you may want to take some time to reflect on additional issues embedded in the film, such as leadership. By focusing on leadership issues such as taking care of Soldiers, communicating, and establishing trust, you can broaden your understanding of the situation depicted in the film.

You indicated that CPT Holston should have taken action to let the town know that he would not tolerate insurgent activity. Good job! This action is highly important and has both security and cultural ramifications. It is important to demonstrate to insurgents that they are dealing with a competent military force and it is important to communicate to the Iraqi civilians that they can trust the Americans to maintain order and stability within the town.

You indicated that CPT Holston should have kept Hazem under constant surveillance. Approximately 39% of junior officers completing a similar ranking task agree with your assessment. To interact with the town, it is sometimes necessary to grab an interpreter off of the street. As a matter of security, however, it was imperative to keep close supervision on Hazem because he was not a trusted source and he had not yet been cleared by Battalion.

You indicated that CPT Holston should have used a systematic approach for dealing with potential IEDs. This action has both security and cultural ramifications. From a security perspective, CPT Holston and his Soldiers need a reliable approach for neutralizing IED threats. It is important to keep in mind, however, that the Iraqi population is watching how American forces handle such threats. For example, when CPT Holston is willing to

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Tripwire: Cultural Awareness

Question Progress

Restart Course

This will hide your old answers and allow you to start over.

Course: Tripwire: Cultural Awareness

What do you think would have made a bigger difference in the outcome of the scenario? Choose the answer you think is best, keeping in mind that neither is "right."

- A. Handling of IEDs
- B. Handling of the second interpreter

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Tripwire: Cultural Awareness

Question Progress

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This will hide your old answers and allow you to start over.

Course: Tripwire: Cultural Awareness

Why do you think the handling of the interpreter made a bigger difference in the outcome of the scenario?

Because if they had done a better job of securing him and maybe not dealt with him so aggressively, they may have figured out his role.

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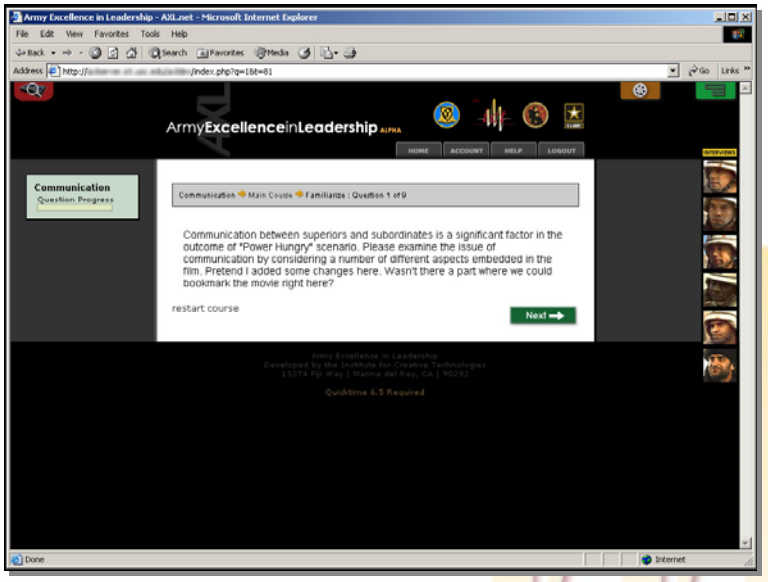
CPT Holston

1SG Morino

Accelerating Leader Development

Baseline → **Engagement** → **Learning** → ***Future Experience***



Pilot of *Tripwire* Cultural Awareness Module

- Purpose:
  - Collect reactions to module and instructional approach
  - Collect character interview questions to improve classification of character answers
  - Determine if module impacted how leaders thought about situation depicted in film
  - Assess learning
  - Explore if emotional reactions were related to learning-relevant outcomes

Participants

- 55 junior officers from three Army installations
  - 44 CPTs, 6 1LTs, 5 2LTs
- 12 deployed twice to Middle East
- 30 deployed once to Middle East
- 13 not deployed to either Iraq or Afghanistan

Procedure

- Small groups of officers participated at a time
- Upon arriving, officers completed 1st set of measures (individual)
- Officers watched film (group)
- Officers completed 2nd set of measures (individual)
- Officers completed cultural awareness module (group)
- Officers completed 3rd set of measures (individual)

Measures

- Demographic items (pre-film)
- PANAS (post-film/pre-discussion; Watson et al., 1988)
  - Positive affect (10 items, alpha = .91)
  - Negative affect (10 items, alpha = .85)
- Reactions to film (post-film/pre-discussion)
  - Character depth (6 items, alpha = .78)
  - Involvement with film (4 items, alpha = .79)
  - Confused
  - Realism
  - Preference for film over paper scenarios and PowerPoint

Measures (cont.)

- Reactions to training (post-discussion)
  - Global training reactions (5 items, alpha = .80)
  - Stimulated thought (4 items, alpha = .75)
  - Character interactivity (4 items, alpha = .81)
  - Applicability of training
  - Wanted feedback

- Learning measures (given pre- and post-discussion)
  - Emphasis on cultural issues
  - Behavioral judgment

Emphasis on Cultural Issues

- Rank-ordering task indicating what issues student prioritized as most important in the scenario
- Task consisted of 21 actions that characters could have done differently
- 8 of the actions were relevant to issues in module
- Students selected top 7 actions they viewed as most important
- Received a point for each cultural issue selected

Behavioral Judgment Task

- 8 forced-choice items that required a response that was either consistent or inconsistent with teaching points embedded in film

Example:

In general, it is better for a leader to…

a. Put mission tasks ahead of physical well-being (e.g., skipping meals, reducing sleep time) in order to get the job done.

b. Take time out to sleep, eat, and hydrate, even if it takes some time away from important mission-related tasks.*

Results: Film Reactions

	M	*SD*
Positive Affect	3.03	.85
Negative Affect	1.82	.67
Character Depth	5.35	.93
Involving Film	5.55	1.03
Confused	1.78	.92
Realism	4.96	1.71
Preference for Film over Text Scenario	6.60	.81
Preference for Film over PowerPoint	6.76	.58

Reactions to Training

	M	*SD*
Global Training Reactions	5.64	.84
Stimulated Thought	5.39	.82
Character Interactivity	4.53	1.23
Training Applicability	5.56	1.18
Wanted Feedback	3.45	1.71

Learning

- After discussion, officers placed greater emphasis on cultural issues in the scenario, $t(35) = 2.50$, $p < .05$.
  - $M = 2.64$ cultural issues before discussion
  - $M = 3.11$ cultural issues after discussion

- After discussion, officers performed better on judgment task, $t(54) = 2.08$, $p < .05$.
  - $M = 4.82$ before discussion
  - $M = 5.08$ after discussion

Correlations Between Emotions and Learning

	Positive Affect	Negative Affect
Reactions to Training		
Global Training Reactions	.43**	.26
Stimulated Thought	.31*	.44**
Applicability	.42**	.31*
Wanted Feedback	.04	.01
Learning		
Behavioral Judgment Pretest	.10	.05
Behavioral Judgment Posttest	.33*	.13

Evaluation Results

- The online case method approach adopted by AXL.Net appears to have value
  - Positive reactions to film and training approach
  - Made cultural issues salient
  - Impacted judgment
  - Made officers think
  - Officers reported they would be able to apply something they learned

AXL.Net: An Open System

- AXL.Net architecture allows instructional content to evolve with Army and instructor needs
  - AXL-designed leadership and cultural awareness modules
  - Authoring capability for instructors to create and modify modules
  - Upload capabilities to add new scenarios
- Toolkit of interactive components
  - Character interviews
  - Critical issues measure
  - Video bookmarking (with video search)
  - Question branching/tailoring

AXL.Net: A Flexible System

- Multiple options for instructional paradigms
  - Distance learning: one person-one computer interaction
  - Small group discussion: computer-facilitated
  - Traditional classroom: instructor-facilitated discussion

- Multiple user bases
  - Instructors and training developers
  - Army leader development
  - Distributed learning environments
  - Other case method practitioners

Potential Research Directions

- Longitudinal research necessary to look at behavioral/ cognitive impact and to assess the system as whole
- Exploration of the benefits and dynamics of small group discussion
- Investigation of research technologies to enhance interactive learning for classroom exercises and/or distributed environments
- Developing technology that will allow rapid transition of real-world stories into scenarios for AXL library

Questions?

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- Production cast & crews

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