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Abstract: As resources dwindle in the wake of the current drawdowns, the United States Army is challenged to find new and effective means of preserving hard-won institutional knowledge. One highly successful means of doing so is the Leader Challenge, which puts novice leaders in the shoes of experienced professionals and forces them to make decisions. Participants are then allowed to access the reflections of other leaders who have taken the challenge, and revise their approach if desired. This paper uses Kim and Reeves' Joint Learning System framework to assess the Leader Challenge and identify future challenges in its wider use.

The United States military is rapidly moving from an era of largess to a period of severe resource constraints. In the next few years the growing national debt and end of Overseas Contingency Operations will impose greater fiscal constraints on the Armed Forces than in the prior decade. In this new environment, leaders will need to seek innovative means to meet servicemembers' needs for professional training and education at lower cost. One such model is the Leader Challenge, an online resource developed by the Center for the Advancement of Leader Development and Organizational Learning (CALDOL) as a tool for sharing leader experiences and encouraging reflection. The Leader Challenge is a powerful cognitive tool that taps into the existing wealth of Army professional experience and allows for timely, focused professional reflection.

Theoretical Model: Kim and Reeves' Joint Learning System

Kim and Reeves (2007) laid out a framework for the evaluation of cognitive tools by placing them in the context of a Joint Learning System. This system includes the learners using the tool, the designed activity encompassing the tool, the other resources available to learners, and the tool itself. To evaluate the joint learning system performance, researchers must first assess the intended use of the cognitive tool, the roles of the learner in that tool, and the resources and guidance for the use of the tool. The researcher then examines what areas are explored with the tool and how the tool use plays a role in the development of further roles of the learner and the resources used. Finally, researchers examine potential problem areas for the use of the tool, including misunderstandings of the tool's use and improper application.

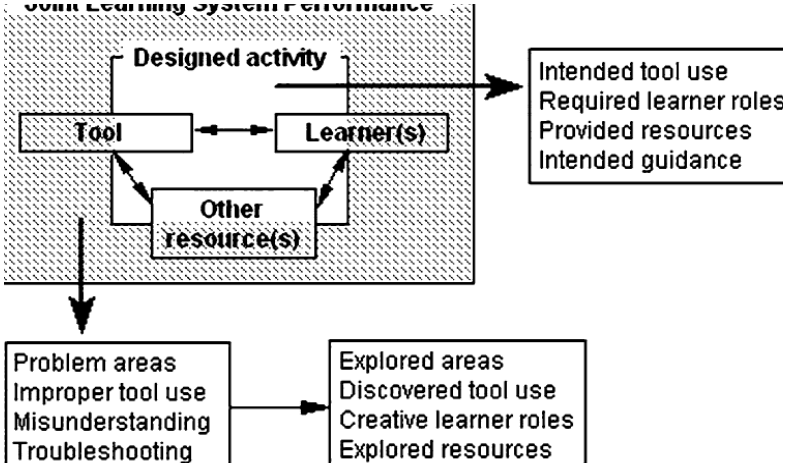


Figure 1: Kim and Reeves' (2007, p.35) Joint Learning System Framework

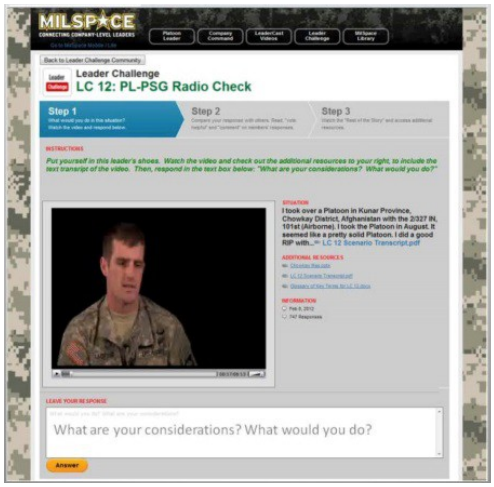
The Joint Learning System of the Leader Challenge

The learners in the Leader Challenge Joint Learning System are company-level leaders in the United States Army, mostly in the ranks of Second Lieutenant through Captain. Most of these learners are relatively new to the Army, with only two to four years of experience in the ranks. Nearly all of them will pass through the leadership positions of platoon leader and company commander before they complete eight years of service. These leadership positions are extremely demanding, requiring leaders to routinely make decisions that impact the lives of their soldiers. In most cases, company-level leaders are in charge of soldiers who significantly more experience in the Army. While the Army accepts that a certain amount of discovery learning will take place, it is imperative that these leaders avail themselves of every possible resource to lessen their learning curve.

To facilitate the learning processes of its soldiers, the Army supports and resources the Army Professional Forums, a collection of more than 50 facilitated forums intended to provide a foundation for knowledge creation and exchange. Two of those forums, the designed activity in this learning system, are PlatoonLeader and CompanyCommand ("the Milspace communities"), each oriented on the needs of its named position. The communities use Hoadley and Kilner's (2005) framework[1] of content, conversation, connections, context, and purpose to create the conditions for learning in a community of practice. This framework helps facilitate access to new and different representations in support of learning and creates the social context for situating that learning in the norms of the profession.

The content and conversation of the Milspace communities also fuel other resources that support the learning of junior officers. As a member of Milspace engages in the forums, he or she builds a profile that includes all of his or her contributions, including thread participation, status updates, and content submissions. This profile becomes a *de facto* "learning log" that the member can refer back to over time. Milspace also contains several specialized topic areas; for instance, the MilSpace Library serves as both a collection of Milspace-generated publications and a dedicated space for members to engage in professional reading discussions. This space therefore reinforces the practice of professional reading, a military norm that has existed for centuries.

The Leader Challenge is another of these specialized areas, intended to give members the opportunity to learn directly from the experiences of a peer. The Leader Challenge begins with an opening video, featuring a company-level leader describing a problem or challenge that he or she actually faced. With no other information provided, the participant is then asked to write a short answer about what he/she would do in response. After the member enters a response, he or she is able to view the responses of other members of the forums. If desired, the member can comment on the other responses or vote them as "helpful" (similar to the Facebook "like" button). Finally, the member views a second video clip from the original company-level leader, providing that leader's decision and its consequences. At that time, the member is given the opportunity to revise his or her original answer; both the original answer and the revision are captured in the individual's "final" response.



1 Kilner is one of the founders of the MilSpace forums and developed this framework in the course of his work in the forums.

Figure 2: A Leader Challenge running in MilSpace

Analysis of the Leader Challenge as a Cognitive Tool

The Leader Challenge is intended to tap into the existing knowledge of the community and aggregate it in a way that makes it more accessible for learning. In doing so, it uses Papert's view of constructionism as learning through the process of building public knowledge structures that are available to the entire community (Ackerman, 2010). The Leader Challenge also draws on Rossiter and Garcia's (2010) conceptual framework of adult education through digital storytelling, which merges adult learning, narrative learning, and digital storytelling. The predetermined stories that are an essential part of the Leader Challenge come after reflection facilitated by a guided interview; those stories stick with tellers and viewers alike because they are unresolved. As Alterio (2003) notes, this type of narrative form allows community members to reconstruct and re-examine the presented events; the ability to see others' responses allows a learner to engage and assist with his or her own learning through narrative and questioning. The Lewin model, where experience is the basis for observation and reflection, also helps explain the success of the Leader Challenge. In this model, items are brought together into a new view that allows for additional actions in generating new experiences (Kolb, 1984). Kolb further emphasizes that this process of learning allows for the creation of knowledge from the adaptation and change of experience.

The primary role of the learner in this system is that of self-directed learning through interactions and engagement with peers. Although community members may be asked to participate in Leader Challenges as part of their coursework, the intent of the tool is to allow self-directed learning at the member's choosing. This is consistent with the previously cited Rossiter and Garcia framework (2010), which stresses the importance of self-directed learning and the assumption of control by the learner. As Boud and Prosser (2002, p. 240) stress, "learning is always relational"; that is, learning depends on the interaction between the student and the environment of the interactions, as well as what the learner is bringing to that environment. In this case, the community members taking the challenge are all peers with varying levels of experience, but all holding equal rank in the community and doing their tasks in focused collaboration. Peers use this collaboration to drive active interaction and exchange of ideas amongst themselves towards a shared meaning (Svenson and Magnusson, 2003). Through their participation in the Leader Challenge, learners are engaged by a challenge in a familiar context where they practice their learned skill (Boud and Prosser, 2002). Learners also engage in many of Baggetun and Wasson's (2006) key sub-processes of learning, including reflection, collaboration, ownership, and demonstrating knowledge.

The resources provided for the implementation of the Leader Challenge are consistent with the overall environment of the professional forums as well as the context of the profession as a whole. The Leader Challenge runs on the same software platform and virtual space as the professional forums, which gives the learner the necessary scaffolding to more fully focus on the learning task. Just as in the professional forums, members use the information technology of the Leader Challenge for engagement and conversation (Svensson and Magnusson, 2003). The Leader Challenge software itself plays the role of what Ravenscroft and Pilkington (2000) describe as a "facilitating dialogue game", where the computer plays the role of an assistant or tutor in helping to guide learning and the user acts as an explainer. Additionally, the Leader Challenge records the members' contributions, giving the learner the option of going back later and examining consistency or inconsistency of his or her answers over time (Ravenscroft and Pilkington, 2000). All of these interactions are consistent with professional norms; in fact, the Leader Challenge traces its origins back to a face-to-face method of discussing similar videos with a senior facilitator.

The power and fidelity of the Leader Challenge also raises the question of potential misuse of its content. The candor and openness required for participation could potentially be used against the member by other officers who violate the norms of the forums. Specifically, a situation could arise where a superior of a participant viewed their Leader Challenge answers and took action against the participant for perceived breaches of professional norms or casting an unfavorable light on the unit. This kind of retaliation would be catastrophic for the atmosphere of open inquiry required for the efficient functioning of the forums. For this reason, more senior officers (e.g. officers who have already completed their platoon leader and company commander assignments) are carefully screened before being allowed entry into the forums. Officers who indicate a desire to "check up" on their subordinates are politely rebuffed; only officers who show a genuine interest in adding to the knowledge and conversations of the community are permitted to enter. The top-down support from senior leadership for the community's norms in this area has kept this from becoming a serious problem.

On the other end of the spectrum, the Leader Challenge could be severely crippled by free riders who provide only the bare minimum input necessary to access the full content of the space. The lack of contributions by

these members could overwhelm the meaningful contributions of other members, who would then see less value in the Leader Challenges. To combat this, all submissions to the Leader Challenge (and all submissions to the forums as a whole) must be done under the member's real identity. The member is therefore accountable to his/her peers for their submissions; a member who is perceived as ruining the experience for others will quickly find themselves the object of significant peer pressure. To keep this peer pressure from being destructive, members of the forum are consistently reminded by tone and content of the professional orientation of the forums and the imperative to keep conversations oriented on the improvement of themselves and their units.

Since its launch in late 2008, the Leader Challenge has established itself as a valuable cognitive tool and indispensable part of select Army professional forums. The Leader Challenge provides an efficient mechanism for self-directed learning in a professional context and builds on existing scaffolding to minimize the cognitive load. To date, 15 Leader Challenges have sparked almost 9,000 unique responses. These have in turn sparked broader conversations within the professional forums and served to reinforce the prevailing focus of the forums on content, conversation, context, connections and purpose. Careful management of forum membership and reinforcement of professional norms within the forums will ensure that the Leader Challenge remains a valuable tool for years to come.

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