Creating an Agile Learning Network: A Mission Imperative

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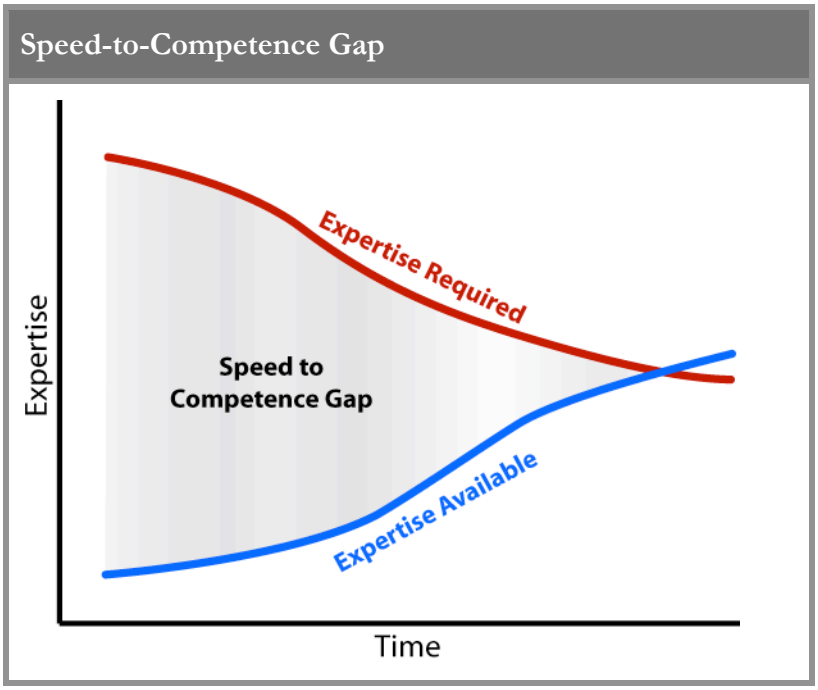
Still rebounding from the downsizing of the 90s, the Intelligence Community (IC) workforce is relatively new and inexperienced. A crisis could strike at any time, finding us lacking the knowledge and skill to effectively address it. ***Learning*** *has never been more important for protecting national security. Yet the learning approach across the IC is based on an industrial-age training paradigm that presumes predictable learning requirements spread out over time and continual access to experts to teach scheduled courses. This paper suggests a new paradigm for enterprise workforce development -- "Agile Learning Network" -- that addresses the dynamic nature of the target, capitalizes on the availability of new tools that enable learning, and takes into account the major shift in the IC workforce demographic.*

Current Director for National Intelligence (DNI) initiatives focus on sharing training courses across IC "schoolhouses," and the creation of a bricks and mortar National Intelligence University (NIU). These are important steps towards sharing information and resources related to learning. However, given the newness of much of the IC workforce, and the pace of change related to national security issues, the IC does not have the luxury of time to create *new* competencies using a training model from the past. The director of one IC agency commented on the time it would take to rebuild his workforce's expertise and skill, observing that it still takes ten years to get an analyst with ten years experience. Unfortunately, our adversaries will not wait until the intelligence workforce has matured to throw the tough issues our way. When a computer virus could take down world banking systems without warning; a rogue state may develop and proliferate a new and disruptive technology; or a pandemic stemming from a remote country could unexpectedly spread throughout an entire region, accelerating the development of expertise and skill becomes a mission imperative.

Recent experience tells us that when a new issue or crisis surfaces, immediate access to expertise is paramount. In cases where there is an issue that the IC has not previously focused on, we usually build the required expertise by hiring new staff, adding contractors and creating training programs. With any of these options it takes months and years to get the required expertise. The time that elapses between the need for the expertise and when it can be delivered is the "speed-to-competence gap." It is this potentially dangerous gap that the Agile Learning Network approach would seek to narrow or close.



This paper examines the faulty assumptions that underlie the existing approach to learning in the IC and proposes a new and more agile model that will directly contribute to achieving National Intelligence Strategy Enterprise Objectives 2 (strengthen analytic expertise, methods, and practices; tap expertise wherever it resides) and 4 (attract, engage, and unify an innovative and results-focused Intelligence Community workforce), and by extension, all five mission objectives. It will further detail the three major shifts that will be required for the new learning model -- the Agile Learning Network and describe next steps that will help make learning a force multiplier for the IC.

Assumptions Behind the "Schoolhouse" Model

Training offices have experimented with online and distance-mediated learning through the

years, but the fundamental schoolhouse paradigm for training has not changed. It starts when a mission need highlights knowledge or skill gaps in a segment of the workforce. The training department is then called in to create a course or curriculum to fill the gap. Once a course is created, employees enroll and attend the course, usually in a classroom setting. The ability to provide any given course is driven by the availability of money, space and instructor/experts.

While the schoolhouse model is very familiar, if we consider the underlying assumptions upon which the model is predicated, we will find that they no longer hold true. This inadequacy is only magnified in situations where increased speed to competence (such as a crisis situation) is required.

Assumption 1: In crisis situations, the IC can afford to take experts away from the mission to support the creation of training courses.

Reality: Lack of mission expertise dedicated to course design and delivery is a significant challenge for IC training offices.

Assumption 2: A course can be developed and delivered in time to meet an urgent need.

Reality: Even with access to expertise, new course development often takes several months to a year in the schoolhouse model (and that is presuming that all resources are made immediately available). Once a course has been developed, it still may take months before an employee can get into a class.

Assumption 3: Supervisors will approve time away from mission to attend training.

Reality: With the pressure of increased responsibilities, many managers simply will not support employees taking time off mission to attend training.

Assumption 4: The learning content is static and can be delivered as a one-time event.

Reality: Current targets are ever changing; ongoing interaction with experts and content is essential.

Assumption 5: The primary goal for attending training is to absorb content, not to connect with other people.

Reality: Connecting with colleagues, with different experiences and knowledge related to a topic, is an important part of increasing competence.[1]

Assumption 6: The appropriate time for field-based employees to attend training is at headquarters between tours.

Reality: Expertise in any given area will become obsolete if not refreshed frequently.

While the assumptions of the schoolhouse model may have been true in the 80's and 90's, they no longer hold true in today's risky and fluid environment. The result is an IC learning enterprise that is often slow to respond, is one step removed from the mission, does not easily scale, and lacks the flexibility required to accommodate a global IC workforce with little time to spare for training.

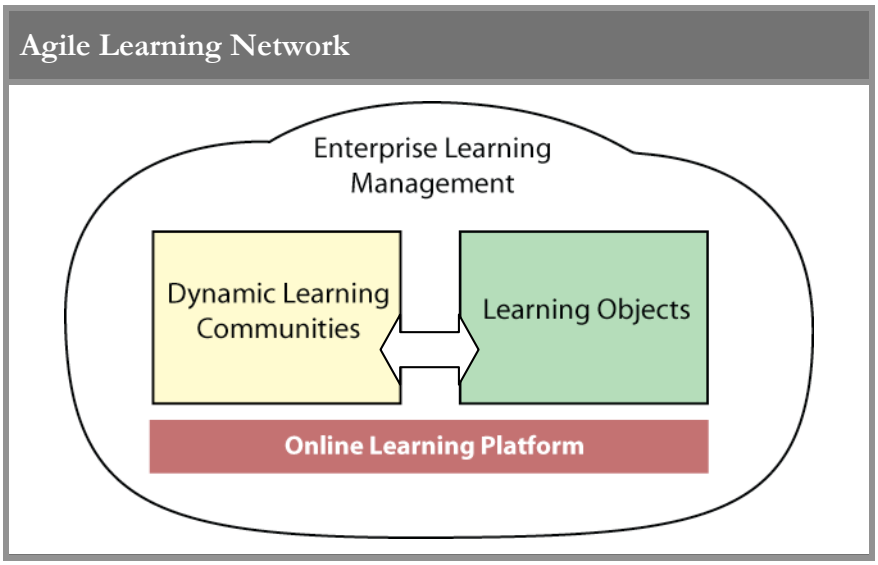
Proposal for the Agile Learning Network

We propose a different way of responding to learning requirements that will move more of the development of knowledge and skill out of the schoolhouse and into the workplace. With agile learning, groups of people with a need for new expertise and skill are brought together with colleagues who possess experience in the topic area to form a Dynamic Learning Community

[1] Informal Learning, Jay Cross; Pfeiffer, John Wiley and Sons, San Francisco – 2007

(DLC), a concept based on research in the area of communities of practice[2]. Within the DLC, IC employees would build and share their expertise while developing the expertise of others.

DLCs are responsible for creating learning content and establishing relationships among DLC members. This is done through the help of tools provided in an online learning platform. The entire Agile Learning Network is managed by an enterprise learning management office that controls the creation of the DLCs and maintains the learning platform.



Members of any given DLC would interact face-to-face or virtually, using tools such as desktop videoconferencing or discussion forums. They would make use of media such as podcasts, blogs, online training modules, readings, and other web resources to create and share learning content. Once developed, these "learning objects" would be tagged, cataloged and stored and then reused or repurposed by other individuals and DLCs. The creation and use of the learning objects would be mediated by a member of the DLC assigned that role. He or she would also find ways to collect both existing and new learning objects and synthesize them to best meet the needs of the specific learning community. As more DLCs are created and learning objects developed, the capability to "rip, mix and feed" (pull down existing learning content, integrate it with other existing content, and then push it out to the DLC) to support the broader community grows exponentially.

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[2] Communities of Practice: Learning, Meaning and Identity, E. Wenger; Cambridge University Press, New York, 1998

What does a DLC look like in action? Consider the group of intelligence officers who are interested in the implications of nanotechnology. A lead group, such as DDNI for Analysis, identifies that there is a gap in the workforce knowledge in this area and takes it to the enterprise learning management office. The learning management office analyzes the requirements and identifies an expert from NSA as the appropriate DLC leader. Using a social network tool, the DLC leader finds other individuals with similar interests at the FBI, CIA, and DoD and invites them to participate in the DLC. She then coordinates with the members to assign a learning object manager, quality evaluator, and other key roles. As a group the DLC defines the rules of engagement including when and how they will meet with participants, and how they will measure success. DLC members are given access to the learning platform and begin creating podcasts on nanotechnology companies and other learning objects showing basic functionality of nanohydrolics. They then invite apprentice members to listen to the podcast and participate in an online question and answer session. Based on additional issues raised during the question and answer session, a sub-group within the DLC agrees to arrange an industry tour for interested members. Each learning engagement can develop into additional learning opportunities.

What is a Learning Object?

While not a new construct in education, learning objects have not yet found their way into the daily lexicon of IC training organizations. A learning object is a small unit of learning that is self-contained, reusable in multiple contexts, able to be aggregated with other objects, and tagged with descriptive information that will allow it to be retrieved by the appropriate search engine. Examples include a short video podcast of a motivational speaker, an on-line vocabulary list for a foreign language, or a case study describing an intelligence success. [3]

Transforming the Learning Paradigm

If a transformation from a schoolhouse model to an Agile Learning Network is to take place, three fundamental shifts must occur. First, the responsibility for teaching must shift from the training offices across the IC to be an integrated part of all mission areas. Second, there must be

[3] Wisconsin Online Resource Center, www.wisc-online.com

a shift from building physical learning spaces to developing a robust online platform for delivering learning content across the IC. Finally, the role of the training offices must shift from content provider to learning network manager.

Integrating Learning with Mission

The first shift focuses on *where* the responsibility for creating and delivering learning content resides. In the schoolhouse model, learning is created and delivered only by instructors who have often been pulled out from the mission area to teach. In the learning network paradigm, all employees would simultaneously be teachers *and* learners at some level. Development of expertise would take place as an integrated part of the mission as groups periodically connect to share and expand expertise physically or virtually through a range of tools comprising the learning platform. Learning would be continual, and content would be developed and updated as change occurs.

Learning Integrated with Mission in Global Corporations

The training offices in a number of world class organizations have already recognized the power of leveraging colleagues in the workplace to build expertise. Faced with the challenge of developing a large and growing global workforce, Turner Construction Company's senior Vice President and Director of Training and Education Jim Mitnick created and deployed the highly successful Turner Knowledge Network which encourages community learning and puts web tools in the hands of employees to create and share knowledge.[4] Similarly, former Head of People Development at the BBC Nigel Payne turned the schoolhouse model on its head when he distributed hand-held cameras in offices around the BBC and encouraged employees to create videos on topics of interest that were then uploaded to a learning portal.[5] Seeking a vehicle to promote peer-to-peer knowledge sharing, Microsoft created its "Academy Live." This program makes available drop-in video production mini-studios in some of its largest sites around the world where any interested contributor can book time online and record a 10 – 50 minute presentation or demo. The final product may be formatted for delivery through a YouTube-like portal on the desktop, or via an MP3 player or other mobile device. A "contributor recognition program" provides prizes to contributors whose videos get the highest ratings.[6]

The integration with the mission areas allows for flexibility, but it is not without structure.

[4] Turner Construction Company's James Mitnick: The Business of Building Learning, CLO Magazine, July 2003
[5] Presentation at Learning 2006, Nigel Payne, former Head of People Development, BBC
[6] Microsoft Partner website (https://partner.microsoft.com/Ireland/40081157)

Specific roles, such as subject matter expert or evaluator, would be defined within each DLC. Experienced members may hold the responsibility of mentoring novice members of a community or creating the learning objects related to the learning community. Thus, while the organic nature of the DLCs allows for agile scaling and accelerates members' speed to competence, its structure allows for metrics to be collected and quality of learning to be assessed.

Creating the Learning Platform

The second shift focuses on *how* learning experiences are delivered across the IC. In the schoolhouse model, learning takes place in brick and mortar classrooms during set course runnings. In the Agile Learning Network, much of the learning content and apprentice/expert mentoring would be technology-mediated and therefore could happen at the moment of need. This allows the DLCs to exist in a virtual and scalable space. If a DLC grows due to mission requirements it is not necessary to wait for several years to build new classrooms, but simply to allocate additional virtual space within the learning platform. Elements of the learning platform are described below.

Tools Comprising the Learning Platform		
Tool	**Example of existing commercial or open source tool**	**Purpose of Tool**
Facilitated Online Learning Environment	Moodle, Blackboard	Enables DLC leaders to provide learning objects and communicate with DLC members worldwide.
Social Network Management Tool	LinkedIn (modified to allow for enrollment into DLCs to be managed)	Allows DLC leaders to manage participants of a given DLC as well as for members to identify communities they would want to join.
Learning Progress and Evaluation Tool	Plateau, PeopleSoft	Tracks learning experiences and expertise for members of the DLCs. Would also identify skill gaps to DLC mentors and provide enterprise level data for skill analysis across the IC.
Calendar of learning opportunities	n/a	Provides a dynamic subscription-enabled calendar of learning events that would be continually updated by DLC leaders.
High-Fidelity Syncronous	Skype (VTC),	Allows for rich face-to-face-like interactions among DLC members when a higher-fidelity environment (i.e.

Communication Tool		the ability to hear tone of voice or see facial expressions) is required.
Simulated Physical Environment	SecondLife, Wonderland	Provides a space for simulated physical interactions to take place in a virtual environment (i.e. practice walking through a building or meeting with a large group of people).
Directory of Learning Communities	n/a	Displays all of the current DLCs and information for requesting membership.
Learning Object Repository(s)	Harvest Road, Merlot, YouTube, iTunes University	Provides a searchable repository for learning objects to be stored and repurposed by members of the DLCs. Learning objects could then be pulled from the repository for use in face to face and online learning experiences.

Managing the Learning Network

The final shift that must occur for the new paradigm to work, is that the *role* of the agency training offices must change from providing classes to managing the Agile Learning Network. In the schoolhouse paradigm, the training offices, as well as the NIU, exist to provide training to their employees in the form of courses. Their success is measured in number of enrolled employees in courses in a given year. However in the Agile Learning Network, the delivery of learning experiences happens in the individual DLCs and the training office becomes the creator and sustainer of the environment that enables continual learning, teaching, and knowledge sharing.

There are several key responsibilities that come along with managing the learning network. The first responsibility would be to oversee the creation of new DLCs and making sure the necessary roles are filled. In the case of smaller DLCs it may be determined that a single member may hold multiple roles, while in larger DLCs there may be multiple members with the same role. Since the focus of the DLCs would change over time as they constantly adapt to the changing needs of the mission, the training office would monitor these shifts and make sure that the right people are involved in each community along the way. The second responsibility would be to research market trends to bring new tools to further enhance the capabilities of the learning platform for the DLCs.

The final responsibility would be to ensure quality and impact of learning experiences within the DLCs. This would also include providing at-the-elbow support to members of the DLC who lack experience in creating learning experiences or developing learning objects. For example, instructional designers would be provided to help community subject matter experts create educational materials for the DLC.

Benefits to the Intelligence Community

The Agile Learning Network has distinct benefits over the traditional schoolhouse model. It substantially shortens the cycle time between identification of a learning requirement and creation and dissemination of learning material. The new model enables the refreshment of learning content continually, which in turn, enables members of the DLCs to keep their expertise up-to-date. Its scalability could support a surge in a crisis situation, and the platform is designed to support and connect a global workforce. Additionally, it furthers the goals of collaboration and information sharing across the IC. The table below compares some of the characteristics of the new model with the traditional schoolhouse approach.

Comparison of Approaches to Enterprise Learning

Characteristic	Schoolhouse Model	Agile Learning Network
Typical Time to Create	Course development time 3 months – a year	Learning objects created and uploaded in near-real time
Source of Expertise	Instructor as primary source of expertise	Community members as sources of diverse expertise
Time Dimension	Finite: courses are event-based	Continual
Access to Learning	Through formal enrollment, driven by number of seats in class and program schedule	Informal, driven by DLC member need and availability
Scalability	Limited by instructor time, instructional methodology and classroom space	Highly scalable to support concurrent DLCs leveraging the same learning objects and tools
Tools	Flipchart, markers, PowerPoint	videocasts, discussion forums, 3D virtual worlds

Simple First Steps Toward Transforming IC Learning

The key concepts of leveraging learning communities, collaborative tools and learning objects could be implemented on a smaller scale with minimum resources in the near term. With the NIU as its sponsor, a pilot project could easily be undertaken for "proof of concept." It would require a part-time project manager and would take approximately one year to complete. First steps are outlined below:

1. Create a learning platform using existing tools. For certain unclassified topics and audiences, this could be done on the Internet.
2. Create a DLC on a relevant topic. Call for participants through the NIU Council.
3. Build the library of learning content through open source learning object repositories. Support the DLC members in the creation of new learning objects.
4. Manage the DLC, and track its progress over time. Adapt and adjust as needed.
5. Identify more learning topics and begin to create additional DLCs.

Conclusion

The Agile Learning Network compresses the time and resources needed to develop the IC's fledgling workforce, thus accelerating speed to competence. The DNI's Strategic Human Capital Plan states: "The threats that face our Nation are many and varied...indeed, even at our best, we cannot be expected to predict every challenge to our national security. When such threats emerge, we must have a workforce with the capacity in place to deal with them, agile and adept enough to respond rapidly and effectively..." With an inextricable connection between expertise and our ability to perform our mission, our approach to workforce development and learning must be equally agile.