Strategy Research Project

21ST CENTURY SENIOR LEADER EDUCATION: UBIQUITOUS OPEN ACCESS LEARNING ENVIRONMENT

BY

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USAWC CLASS OF 2011

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This paper begins by providing an overview of the literature defining the 21st Century Educational environment from a public and Training and Doctrine Command (TRADOC) perspective for today's Army senior leader education system. The paper then examines the infrastructure currently supporting the Senior Service College student educational environment. Finally, the paper articulates a recommendation for the Army to enable 21st Century Education.

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ABSTRACT

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21ST CENTURY SENIOR LEADER EDUCATION: UBIQUITOUS OPEN ACCESS LEARNING ENVIRONMENT

> "Roughly 2 years ago—with the introduction of the iPhone and the 3G network—access to information all-the-time exploded. With it, expectations about access to information all-the-time, especially among young men and women of military age, exploded as well. The question for us is whether we're going to ignore it or seek to take advantage of it."
>
> —Martin E. Dempsey, TRADOC Commander

The United States Army War College (USAWC) provides an educational network for students attending Senior Service College (SSC) commensurate with the networks of any other Army installation. The resident educational network limits discourse to only Common Access Card (CAC) carrying individuals within the Department of Defense. This restricts traditional university academic discourse and prohibits the use of personally owned or military issued mobile devices to access educational content in the .mil domain. The restrictions for personally owned devices not only prohibit simple tasks such as, looking up publications, doctrine, or accessing research resources, but they negatively affect a strategic leader's ability to build a Personal Learning Environment (PLE) student's can take with them for lifelong learning upon graduation.

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means triad to meet the current student requirements and the future needs of the "always-on" joint, interagency and multi-national educational environment.

21st Century Education

The breakthrough technologies General Dempsey's epilogue describes are game changing in form-factor and access. In an era of immediacy, iPhones, iPads and other digitally held devices coupled with a reliable wireless network now deliver instantaneous rich content to the beholder. The Army's current Smart Phone initiative, as LTG Michael Vane states, "will move educators from the sage on the stage to a guy on the side.[1]" With the capability and potential these devices offer, there is no time better than the present to re-evaluate the delivery of education and provide the pocket professor to our Strategic Leaders.[2]

The 21st Century arrived, as Dr. Douglas Kellner from UCLA describes, "on the wave of a technological revolution having a greater impact on society than the transition from an oral to a print culture.[3]" At Senior Service Colleges (SSCs), students face many emerging problem sets such as global warming, famine, poverty, health issues, a global population explosion and other environmental and social issues. These complex global issues emphasis the requirement for SSC students to be able to communicate, function and create change personally, socially, economically and politically on local, national and global levels. 21st Century Education does not limit learning to a profession, but to the internal and external influencers affecting a learner's learning environment. Tony Wagner in his book, "The Global Achievement Gap" advocates a set of survival skills for the 21st Century learner: Critical Thinking and Problem Solving, Collaboration across Networks and Leading by Influence, Agility and Adaptability, Initiative and

Entrepreneurialism, Effective Oral and Written Communication, Accessing and Analyzing Information and Curiosity and Imagination.[4]

21st Century Education changes the teacher or classroom-centric environment to a learner-centric environment. The skills describing the 21st Century learner are critical thinking and problem solving, agility and adaptability, taking the initiative and entrepreneurial style leadership, effective oral and written communication, accessing and analyzing information and imagination The curriculum incorporates higher order thinking, technology and multimedia to shape the learners environment.

The following from 21st Century Schools, an organization focused on future education, defines "School", "Teacher", "Learner" and "Curriculum" for the 21st Century:

"Schools transition from 'buildings' to 'nerve centers', with porous and transparent walls, connecting teachers, students and the community to the wealth of knowledge existing in the world.[5]" Teachers transition from the primary role as a dispenser of information to orchestrator of learning and helping students turn information into knowledge, and knowledge into wisdom. Learner's today require maintaining their interest, by helping them see how the learning prepares them for life in the real world. Instilling curiosity, exciting learners and providing challenging education environments influences learning outside the formal school day and promotes lifelong learning.

Twenty-first century curriculum has certain critical attributes. It is interdisciplinary, project-based, and research-driven. The curriculum connects to the community – local, state, national and global. Sometimes students collaborate with people around the world in various projects. The curriculum incorporates higher order thinking skills, multiple intelligences, technology and multimedia, the multiple literacy's

of the 21st century, and authentic assessments. The classroom expands to include the greater community. Students motivate themselves and work both independently and interdependently using collaborative tools to bring together ideas, sources and professional experiences to raise the body of knowledge and common understanding. The curriculum and instruction focuses on challenging all students, and provides for differentiation.[6]

The environment 21st Century schools previously define provides the characteristics desired by professional executive education programs. Traditional academic institutions as well as SSCs must strive to maintain the professional executive education experience contained within 21st Century Education. As Dr. James Belasco explains in his 1991 book, educators must "Teach the Elephant to Dance". Dr. Belasco explains elephant training causes it to stay in one place, through conditioning, with nothing more than a bracelet around one ankle - attached to nothing. If the tent catches fire, and the elephant smells the smoke and sees the flames, the elephant overrides the conditioned response and moves.[7] Finding a way to get people to smell the smoke and see the flames - without actually burning down the tent is the task. Teaching this elephant to dance is going to be a major endeavor, encompassing everything from educator and administrative education at Senior Service Schools to in-service and continuing professional development for educators, to educating Department of Defense leadership.

21st Century Education in the Army

The concept of 21st Century Education is relatively new to the Army with conceptual foundations first approved and published in November of 2009. There are

four principle documents broadly outlining 21st Century Education within today's Army; *The Army Capstone Concept* (ACC),[8] *the Army Operating Concept* (AOC),[9] *Army Leader Development Strategy for a 21st Century Army* (ALDS)[10] and *The Army Learning Concept for 2015* (ALC).[11] These documents comprise the "how" and "why" future armed conflict occurs and the framework for desired skills balanced between the three pillars of training, educating and experience desired in military leaders.

ALDS and ALC provide an overview of the learning environment and a proposed strategy to transform the Army's Learning Model. ALDS address five critical areas and identifies critical 21st Century Soldier Competencies for cultivation across all echelons and an individual's career span. The first of two principle themes of this proposed learner-centric model embodies increasing rigor, relevance, and effectiveness of face-to-face learning experiences in military schoolhouses through instructional strategies maximizing the effectiveness of limited resident learning time. The second expands the reach of the schoolhouse through the creation of a digitized learning environment while blending the operational, institutional, and self-development domains for a career-long learning capability. The absence of the student as the centerpiece of a learning system in the previous discussions yields a fragmented approach to developing enterprise-wide personal learning environment capabilities to support the lifelong career development of a Soldier.

Problem

The problem with the current guidance is inability to gain funding and enable the technological educational framework to support the desired learning environment. Additionally, the ability to integrate a desired environment into the Army's technology

infrastructure while meeting the information assurance requirements virtually prohibits the pace of change desired by the documents supporting the Army to change. Why then is this a strategic problem? When the Army Enterprise does not recognize the dysfunctional nature of current systems and processes and the detriment to the organization, this inherently describes a leadership problem requiring a fundamental review. The synchronous review of technology supporting the learning environment similar to the review previously conducted with required leader learning traits will articulate the desired end-state, technology supporting this end-state and the development of an enterprise acquisition strategy to achieve the desired end-state.

Directives on Senior Leader Education

There are three documents guiding senior leader education; Process for Accreditation of Joint Education (PAJE) for Joint Professional Military Education (JPME) Phase II,[12] Middle States Commission on Higher Education (MSCHE)[13] accreditation and the aforementioned *Army Leader Development Strategy* (ALDS). Each document articulates the qualities and skills desired in the institution graduates. Additionally, the documents emphasize certain characteristics of the learning environment. JPME and MSCHE provide credentialing based documentation allowing the institution to award candidates the commensurate degree or credit for attendance. The ALDS establishes the skills and abilities desired over the career of a leader. All three documents assert authority but fall short of providing the how and funding required in achieving the requirements. Lastly, the scheduled review of these documents does not coincide with previously mentioned guiding Army documents and may be in direct conflict with a desired end-state.

With these planning documents in mind and in a volatile, uncertain, complex and ambiguous environment, the Army aspires to develop leaders with competence and character serving at all levels. SSC students must plan strategically, lead in the operational environment and fight and win the nation‘s wars, and to do so, the Army must find the balance between education, training, and experience developing officers grounded in the Army values, agile, culturally astute, and able to design, plan, and execute in a hybrid threat[14] environment. Further, SSC students have to be able to think and solve ill-structured problems on an iterative basis while developing and managing the future leadership of the Army profession while staying true to the Army Values and supporting the Army Family.[15]

Considering the documentation for Senior Service College education unveiled in the preceding paragraphs, an understanding of the technology currently supporting the learning environment follows. As with any instructor-based classroom, the technology currently supporting the SSC learning environment focuses on the professor. Professors control automation equipment from the front of the seminar room driving PowerPoint presentations, the occasional website or YouTube video. Commercial wireless networking complements each room. The wireless network does not directly connect to the learning environment unless accessed from a Common Access Card (CAC) device. A CAC-enabled Microsoft SharePoint framework provides the collaboration for each seminar, but SharePoint focuses on document storage and rarely, if at all, achieves collaboration and due to the CAC-enabled nature, mobile device accessibility does not occur. Other common professional executive education services such as CAC-enabled email account, file storage on a network share only accessible

from a school computer and traditional book issue from the library requiring return upon completion of the course.

The previous paragraph covers the Professor and Classroom; the following will focus on the learner. To generalize for a moment, students arriving for SSC attendance carry some of the latest technology and posses the skills required to operate and employ this technology. A poll of one seminar's worth of student's with informal questions, resulted in ninety percent of the students wanting to use personal email due to ease of use than the us.army.mil email provided to them for maintaining daily contact. Twenty percent of these students used texting regularly for contact. Forty percent use social media sites such as FaceBook, YouTube or Twitter. Even though statistics favor newer technology, not all students want movement in the technology direction. Hence a balance must occur. Dr. Anna T. Waggener, Director, Institutional Assessment at the United States Army War College (USAWC), surveys students upon arrival to capture various norms of students and summarizes the results.[16] The 2010 survey results of USAWC Students provided by Dr. Waggener supports the notion students arrive at SSC possessing the technology required in 21st Century Education.[17] The survey asked arriving students questions if they personally own wireless computers, web-enabled phones, and e-readers. Sixty nine percent of the SSC students posses a web-enabled mobile phone upon arrival at SSC. Ninety percent of the students personally own a computer of which fifty four percent connect wirelessly. Sixty nine percent of the students own a web-enabled phone. The mere ownership of the technology does not confirm the student's use of the capability. Ownership of the devices does support

evidence of SSC students arriving at USAWC possessing a capability 21st Century educators use to enable 21st Century Education.

The SSC curriculum covers six core courses, the Strategic Decision Making Exercise (SDME), the Strategic Research Project (SRP) and the National Security Seminar (NSS) together constitute the "core" curriculum. All students participate in the carefully sequenced and functionally related courses in the core curriculum, each building on and integrating material from earlier work. Following completion of SDME, students take five electives.[18] Technology supports the professor in the curriculum for the core course delivery. SDME for one week immerses the student into a technology-enabled environment by providing a scenario-based exercise coupled with easy to use tools supporting the decision maker and solidifying the core course learning objectives. SDME epitomizes the synthesis of technology and curriculum design. The remaining electives focus on student choice and have varying degrees of technological support. In general, the curriculum design focuses on contact hours, learning objectives, curriculum topics and associated readings from library issued material.

The previous paragraphs outline the technology supporting the senior leader education. An important understanding at this juncture is what the Army as an enterprise provides and what resources are available at the local level. The Army enterprise provides basic services: email, computers and access to an unclassified local area network with restrictions to approved internet sites, file storage and printing. All commonly provided services across the enterprise. The Senior Service College has responsibility for providing the education environment for resident SSC students and currently based upon Microsoft SharePoint at the Army War College. For the record,

the Distance Education Program operates a completely separate educational delivery platform not linked to the resident education program and in some instances duplicating efforts. This demonstrates two important points; the "delinking" of the college from the Army Enterprise and the inability of a student, at any military level, not just SSC, from inception throughout one's military career to have a Personal Learning Environment (PLE). Do not misunderstand the point the schools do a tremendous job of creating an environment for their students to learn, but this localized environment rarely extends beyond the tenure at the attended school.

The Army Enterprise does have robust capabilities. Two such capabilities reside with Army Knowledge Online (AKO) portal and The Army Distributed Learning Program (TADLP). The AKO portal has a suite of useful applications from document storage, to collaboration, instant messaging and acts as an authentication gateway to other resources. AKO though, struggles with an identity and does not provide the Microsoft suite of applications Army users' access daily. AKO does not have a mission statement and the fundamental downfall centers around the Army, as an Enterprise, looking to AKO first to solve requirements and AKO's ability to deliver.

The Army Distributed Learning Program's (TADLP) mission is to improve Army readiness by providing rigorous, relevant, and tailored distributed training and education to Soldiers, Leaders, and Army Civilians anytime, anywhere from a responsive and accessible delivery capability.[19] The new TRADOC Capabilities Manager (TCM), Helen Remily states, "The innovations for distributed learning (dL), require that the Army discover and develop new ways of providing distributed training using traditional means

while integrating new technologies. The purpose of DL is to provide access to vital training through multiple means and technologies, anytime and anywhere."[20]

These two Army organizations provide tremendous capability and associated infrastructure. The downfall occurs in how and why the organizations provide capabilities as each has competing offerings and infrastructure with no set guidance on for the Army as an enterprise. TADLP does have a mission to "Improve Army readiness by providing rigorous, relevant, and tailored distributed training and education to Soldiers, Leaders, and Army Civilians anytime anywhere from a responsive and accessible delivery capability. " TADLP does provide redundant server infrastructure and capability resident in the AKO suite of services. AKO and TADLP present two examples of infrastructures providing services to Army users not synthesized under one leader and not complementing each other, but providing competing capabilities.

Ends

Within the *Army Capstone Concept* (ACC), the *Army Operating Concept* (AOC), *Army Leader Development Strategy for a 21st Century Army* (ALDS) and The *Army Learning Concept for 2015* (ALC) the Army defines the characteristics desired in future leaders and explicitly, Senior Leaders. These skills and abilities desired in the volatile, uncertain, complex and ambiguous (VUCA) environment develop over a period of time and with dedication on the behalf of the learner and the learning organization. The earlier discussion from 21st Century Schools, discusses not only the desired ends of the learner, but also, the school, educator, and curriculum for the 21st Century. ALDS and ALC cover the learner and certain aspects of the learning environment, but they fall short of providing a desired future for the educator, classroom and curriculum. Lacking

definition in these three areas allows organizational interpretation to occur and from an information technology perspective, various un-orchestrated systems supporting local organizational desires instead of the Army Enterprise.

Ways

The preceding Army documents define the desired skills and abilities for senior leaders. The documents provide a strategy or way the Army envisions developing the future leaders and desired end-state skills and abilities. From a technology perspective, the documents lack an appreciation for the technology capabilities available to deliver 21st Century Education. In addition, the Army lacks the flexibility to take changes in doctrinal publications and provide the actionable items required for information technology leaders to implement the supporting structure. The Army panels used to review the current doctrine supporting leader development and strategy fall short of succinctly articulating the future desired technology environment to support the desired 21st Century education end state.

When the Army decides to develop a new combat system, they create a detailed specifications document for the new capability. The document cites newer capabilities or gaps in existing capability to support changing tactical or operational requirements. The catalyst can come from a change in doctrine or changes in techniques, tactics and/or procedures. An assertion made within this paper is the Army, at all levels, tactical, operational, and strategic, within the education and training domains, has not recognized the importance of the Soldier as an outcome, content as a system and approached the acquisition of an enterprise personal learning environment capability to support the education and training domains. The Army needs to develop a web-

enabled, Mobile device enabled, user-centric, scalable and platform independent content sharing environment supporting 21st Century education and the 21st century senior leader.

Means.

The way the Army considers educating leaders post undergraduate and throughout the career must change. This starts by establishing a capable delivery environment available 24/7/365 and accessible from any device. From Basic Officer Leadership Course (BOLC) through Military Education Level 1 (MEL1), there exists no reason not to have an unclassified mobile device enabled learning environment. AKO and TADLP demonstrate environments currently CAC-enabled, capable of providing the Army a robust environment. The enterprise services a leader requires to support the academic rigor throughout an Army career need definition. Therefore the Army must move forward in a holistic approach to managing content by establishing a system to validate user content for reuse, inform users of the presence of new content and allow user access to content when the user needs access. In terms of senior leader education, when a new concept, such as the Design concept, is taught at the Army War College, the War College validates the content, adds the content to the content sharing framework, since all war college graduates and existing students subscribe to the war college content, the senior leaders receive a notification containing the new content. Informing a subscribed user community coupled with one location for validated content establishes the fundamental principles of a content focused sharing environment necessary to move the Army into 21st Century Education.

21st Century Senior Leader Education

Access, access, access. As stated by Gen Dempsey, with the implementation of the current 3G network and 4G network soon coupled with mobile technologies such as the iPad/iPhone, Droid and various other tablet devices, mobile internet access avails itself everywhere. The Army, previously, as a fundamental philosophy, saw this capability in a negative context. Gen Dempsey, though, has brought this to the forefront of discussion and initiatives throughout the Army exist including those occurring at the Army CIO's cyber directorate. As Lieutenant Colonel Keith Newsome, lead for mobile electronic device activity states, "The Army is at the forefront of the march toward wider smart-phone use. With support from top ranking officers and officials, the Army plans to begin issuing smart phones to personnel early this year, and the service is taking steps to secure those digital tools."[21] The Army still must protect first and asks questions later, but change is appearing on the horizon. The debate of whether education material needs the same protection as operational information will continue, but in a learning environment, the risk for anytime, always on access for leader's educational consumption appears to outweigh the protection. As Barry Shaeffer eloquently stated about federal IT programs floundering, "Federal IT program Failures: It's the content, stupid"[22] because agencies focus on systems rather than substance and access to the content is critical. The access to Army educational content deserves a relook as to how delivery occurs to the student. In the one-size fits all Army, the time has come to deliver anytime, anywhere education over a mobile device accessible environment.

Strategic Direction: "Personal Learning Environment"

GEN Dempsey in a recent Association of the United States Army (AUSA) magazine article stated one of the top two Army imperatives includes a focus on leader development and changing the delivery of education from "sage on stage" to "guide on the side". This statement strategically shifts the delivery of education method and reinforces the Army enterprise providing a web-enabled Personal Learning Environment (PLE) to support learning throughout an officer's career. PLE describes the tools, communities, and services constituting the individual educational platforms learners use to accomplish their own learning and pursue educational goals.[23] A PLE contrasted with a Learning Management System (LMS) compares the aforementioned "sage on the stage" to the "guide on the side" due to PLEs focusing on the learner and the LMS representing course-centric delivery. Learners still might incorporate LMS instruction as a portion of the PLE to achieve educational goals. A good example of a PLE might incorporate blogs where students comment on learning and the message posts may reflect information drawn from across the web, from internet sites similar to YouTube or in RSS feeds from news agencies. While most discussions of PLEs focus on online environments, the term encompasses the entire set of resources a learner uses to answer questions, provide context, and illustrate processes. As used within this paper, the term refers not to a specific service or application but rather to an idea of how individuals approach the task of learning. To visualize the PLE concept, figure 1 graphically represents some but not all of the PLE components:

Figure 1. A graphical representation for a Senior Leader Personal Learning Environment.

The items within the PLE structure represent the influencers a senior leader has in various stages of his personal and professional development. A study currently underway by the Army seeks to codify and define the Army as a profession and the traits contained within the Army profession.[24] This paper supports the Army as a profession and begins to capture the elements influencing the personal learning of the senior leader professional.

The PLE representation may not come as a surprise as most of these items have existed in a senior leader's career. The changing dynamic becomes the strengthening of the tiny arrows between each item caused by the evolution of web and the availability and speed of wireless technologies connecting the learner to each domain. Senior leaders use the new web technology to connect with the resources or more specifically, the content the PLE offers in figure 1 on a more steady and consistent basis. The new web technology also enables the PLE to "inform" the senior leader when new domain specific content becomes available. This enables, as Gen Dempsey states, the ability

of the senior leader's learning to take center stage and the guide shifts to the side allowing technology to enable the learning due to the availability anytime and anywhere. The components of the PLE center on those outside of the military domain. The explosion of social media tools and civilian institutions using new web technologies have garnered our attention and enabled this component of the PLE. The unfortunate part comes in the civilian-side of the PLE has out-paced the military learning resource-side. The following paragraphs focus on the Military Learning Resource and developing the domains contained within to better support the senior leader learning.

Figure 2 offers a start to the components of the military learning resources needed in a PLE. An initial review indicates similar civilian components already existing potentially complementing the military learning resource domain of a PLE. The infrastructure required exists in the civilian space right now; AKO and ATSC also possess some of the capabilities. The accomplishment of creating the military representation of the civilian components can occur collaborating with civilian counterparts or the Army creating like-type resources on the military network.

Figure 2. The PLE Military Learning Resource Capabilities.

As an example to demonstrate how a civilian capability provides learning value to the PLE, the “Google Alerts” ® web technology pushed content to the author for review in the development of this paper. The technology consists of a user creating a Google account, logging into Google Alerts, selecting words or phrases desiring notifications on and then waiting for the Google technology to push content to the user as the content updates in the networked world. The application of this technology in the Army context places a like-type capability within the Army networks to index, catalog and categorize content, a senior leader selects desired words and phrases and then receives notifications of documents loaded to the Army space, matching the desired user content. Each military learning resource in Figure 2 depicts a repository of information the senior leader and greater Army community can benefit from with prior planning and application of technology.

An example of another customizable PLE feature centers on the use of Really Simple Syndication (RSS) feeds. RSS feeds come from a publisher’s willingness to syndicate or feed information in a standard format across the internet automatically. The PLE consumer has in the PLE environment an RSS reader with the ability to capture the syndication of choice and display summarized information for review. The learner then has the ability to scan the articles for interest and expand on the desired content to accomplish the learning objectives for the day.

Blogs also tout customizable features and contain functionality deserving additional explanation. The term blog comes from a blending of the words web and log indicating a logging of sorts for a website. Typically blogs contain text, photos and links to other sites. Most blogs express individual opinions on a thought with the text

commonly displayed in reverse chronological order, meaning the newest items exist at the top. Blogs inform the PLE in two ways, first blogs syndicate or send information as an RSS feed, informing the PLE when new content becomes available and secondly the blog captures or records an individual's thoughts on a topic of conversation. The capturing of the content, coupled with the informing capability of the blog through RSS provides the basis for valuing the blog as an enabling tool in the Personal Learning Environment.

Collaborative technologies demonstrate another important web capability enhancing a senior leader's learning. The ability of a senior leader in a learning environment collaborate with multiple colleagues over the commercial network using instant messaging, chat, voice and/or video enhances the student's learning and extends the classroom beyond the brick and mortar. Collaboration made possible due to the availability and stability of the new web collaborative tools Defense Connect Online (DCO)[25] primarily for the Department of Defense community.

Lastly, the enhancement social media provides, while not fully understood from a research standpoint, deserves mentioning in enhancing the senior leader's learning. Twitter, FaceBook, Blogging and other social media outlets serve to bring together individuals openly sharing opinions and thoughts to serve as a record and to foster discussion. Senior leader educators and learners do not have to speculate on an opinion a senior leader or professor has on a specific topic, he or she just has to open a web browser and navigate to the Twitter page with this information. The technology-enabled individual may have already subscribed to the senior leader's Twitter page and received a "push" of the content on the particular subject. This, as previously touched

upon, demonstrates the ability of the new web to inform “push” vs. request “pull” content to senior leader learners. MilBook[26], as an example, demonstrates an already in place example capability to connect people to people and people to information. “Milbook is the ultimate professional networking capability,” said Emerson Keslar, director of MilTech Solution. “I don’t know of any capability that does a better job connecting those who know with those who need to know.”[27] Inaccessibility from mobile devices currently tops the list of drawbacks with MilBook and 76,000 users out of nearly two million after a year in existence either indicates a potential flaw in marketing or users not adopting the capability.

Benefits and Risks; Way ahead:

Creating a Personal Learning Environment enables the Army to have a cadre of senior leaders prepared for the full range of complex missions and a supporting structure to turn to when the future security environment changes . As stated in the Quadrennial Defense Review (QDR)[28] foreign language, regional and cultural skills top the list of items with special emphasis inherently linking language and cultural expertise to success in the current regions, a PLE provides the ability to accommodate this type of continued and adaptive learning. Additionally, linking Joint capabilities and providing the ability to maintain aspects of a Joint experience in the PLE enhances the overall career experience of the senior leader. Lastly as the Department of Defense works to ensure the educational institutions contain the correct staffing and resources the PLE enables a flexible delivery component to allow the sage to move from the stage and become a guide on the side, servicing a wider range of individuals and meeting educational objectives

The QDR describes risk as “making choices: accepting and managing risk is thus inherent in everything the Department does.”[29] As the framework to organize risk, the QDR uses the risk categories of operational, force management, institutional and future challenges risk. Therefore, a brief summation of the Army failing to provide a PLE-like capability across the Enterprise in the context of QDR risk categories follows. . The ability of the Army to execute current, planned, and contingency operations in the near term greatly depends on the ability to implement a PLE solution for current forces as the drawdown from the current wars begins. Garrison training of the past will no longer be an acceptable solution for a seasoned military force. The ability to recruit, retain, train and educate an all-volunteer force hinges on the ability to deliver a PLE environment capable of assisting in sustaining the force readiness and building morale by engaging leaders. PLEs diminish the institution risk by allowing the sharing of ideas to help organizational effectiveness and efficiency. Lastly, an adaptable PLE helps the Army’s ability and capacity to execute future missions successfully and deter/defeat emerging threats.

Conclusion

The Army recognizes after nine years of war a crossroads in the establishment exists and therefore issued new strategic guidance to change direction. The civilian academic machine already recognizing environmental changes presses onward with retooling the establishment and delivering revised curriculum to meet the needs of the educational community. The Army to civilian academia gap regarding student learning experiences appears on a narrowing path. This gap can quickly close if the Army develops and delivers a 21st Century senior leader Personal Learning Environment to

leverage and build the required skills necessary to operate in the volatile, uncertain, complex and ambiguous (VUCA) environment. The enablement Army-wide of Military Learning Resources, as depicted in Figure 2, provides a globally accessible repository of information the senior leader and greater Army community can benefit from with prior planning and application of technology. The Army goes to great lengths to articulate the characteristics desired in the future senior leaders of the Service. The creation of an accessible PLE with new web technologies enables the Army to ensure the future senior leaders along with the other service leaders can operate in a VUCA environment.

The Army can also conduct further research in three closely related areas: Personal Electronic Devices (PEDs), valuing military content for disposition and authoritative sources within the military describe three fertile areas deserving review in conjunction with the research contained within this paper. The evaluation of PEDs along with the educational value of having a device with the ability to deliver content in the palm of your hand deserves exploration especially within the military framework. The valuation of content generated by the military individuals and the ability to place this content into a searchable, scalable environment for reuse requires a cost benefit analysis. Lastly, the Army needs to deem organizations and their content as authoritative and all others required to reference the authoritative sources. How to design and implement a system of authoritative sources across the Army provides the last area providing substantial benefit to enabling the recommendation of a Personal Learning Environment in this paper.

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