

Officer Professional Military Education: a New Distance Learning Evolution

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Executive Summary

Socrates famously wrote, “Education is the kindling of a flame, not the filling of a vessel.” As military officers, we must continue to hone our craft through career-long learning.

This means having a meaningful, relevant, dynamic, and accessible non-resident program for Officer Professional Military Education (OPME). This paper will outline a design evolution to bring OPME up to the state of the art in blended learning, to include multi-platform, multi-domain, and multimedia solutions that come together forming a cohesive education construct.

Centered around a core curriculum, this program will exist in 4-year cycles from the date of commissioning, with officers adding electives from a diverse array of schools and programs with the cycle culminating in a Personal Interaction Milestone, or PIM, at the completion of each cycle. The PIM acts as a short internship or interdisciplinary learning opportunity offered as a carrot every four years. At the end of each cycle, officers who have met certain elective thresholds can even earn an advanced academic degree from Air University. The main objective, however, remains an establishment of quality career-long professional military education for the Total Force.

As the mandatory piece of OPME, the core curriculum comprises approximately 12 credit hours’ worth of material to learn in the span of four years. This gives ample opportunity for officers in every career field to complete the requirements. The elective piece can provide additional credits toward advanced academic degrees or professional certifications, or it can purely serve to meet the desires of certain officers who wish to broaden their cognitive diversity. Finally, the Personal Interaction Milestone takes an officer’s input to the next level by allowing him or her to design an internship in the private sector or partnership with a sister service (providing joint environment exposure) designed to shadow and learn from other cultures, similar to existing Air Force programs.

Beyond the strict boundaries of the curriculum, this proposal serves as a forum for open dialogue, innovative discussion, and social networking with officers around the globe. In the professional realm, this includes an active mentorship program, periodic in-person events with certified facilitators at local bases, and a digital social avatar that follows the officer throughout his or her career, detailing accomplishments and coursework among other facets. The experiential piece of this OPME construct also serves to fulfill an important and required component of the curriculum: leadership exercises. Officers the world over can develop their leadership and followership skills through these activities in virtual simulation environments that provide vital experiences.

As a philosophy, this multi-faceted approach derives from blended learning models, which according to research return the best quality of learning in the most efficient manner. By keeping the content relevant and the course interface accessible and convenient to the Total Force, this evolution will prove a tremendous boon to officers on a personal level in addition to benefiting the Air Force as a whole. Using off-the-shelf interfaces from online universities and colleges in addition to 3D simulation kits such as Virtual World and Second Life where students can link up with classmates to participate in leadership scenarios and unique challenges, officers will find new and engaging ways to develop and therefore serve the nation as better leaders.

The Core Curriculum and Online Learning

The core curriculum forms the foundation for this construct and will be broken into 4 year cycles beginning on the date of commissioning. These 4 year cycles will continue for a total of 24 years or 6 cycles. Officers will not be allowed take core curricula offered in their next cycle; even if they have completed the core curriculum in their current cycle. For example: A first lieutenant is in his first 4 year cycle. He has completed his entire core curriculum in that cycle. He will then have to wait to begin the core curriculum in his second 4 year cycle, after 4 years have passed since his date of commissioning.

The first 4 year cycle's core curriculum will contain the 3 credit hour Squadron Officer School Distance Learning (SOS DL) program. The second and third 4 year cycles will consist of the Air Command and Staff College Distance Learning (ACSC DL) Master's program curriculum. The ACSC DL Master's program has eleven courses consisting of 33 credit hours.

Three of these courses would be added to the first 4 year cycle with the SOS DL program. The remaining eight courses would be evenly split in the second and third 4 year cycles. The goal is to have 12 credit hours worth of core curriculum in each 4 year cycle, therefore, when an officer completes the first three cycles or 12 years, that officer will have 36 credit hours and earns a Master's in Military Operational Art and Science degree. The fourth, fifth, and sixth cycles will come from the Air War College Distance Learning (AWC DL) curriculum. Overall SOS DL, ACSC DL Master's and AWC DL will be used to help build the core curriculum for this new program.

Internet and advances in communication technology not only are transforming the way we communicate with each other but also are affecting the way we learn and call into question the traditional classroom approach to learning. Students now can be connected online to a global community of students anytime and anywhere, without being restricted by time, place, or situation. Recognizing the growing popularity of the Internet, we should consider how best to utilize both face-to-face and online learning for purposes of higher education. What makes blended learning (which combines face-to face and online learning) effective is its ability to facilitate group discussions by providing the condition for open dialogue, critical debate, negotiation, and consensus. Blended learning facilitates these conditions with its multiple forms of communication. For example, at the beginning of a course, students enrolled in a particular core or elective course could meet regionally, at their bases, to have a face-to-face class to meet and build community. In contrast, discussing a complex issue that requires reflection may be better accomplished through an asynchronous Internet discussion forum.

In order for the online learning to be effective, the online courses should provide a real course experience. For example, the online class would start on a given day, with video lectures and assignments every week. Fixed due dates would ensure that all participants engage in the same topic facilitating online discussions. Moving away from a traditional classroom allows for the course material to be broken into short modular units. It is easier to focus and comprehend 10 to 20 min blocks of material as opposed to 1 hour blocks.

The flexibility of online classes enables more individualized experience by including optional refresher material for those who are not familiar with the topic or expand the material by including optional information for those who wish to enhance their knowledge. This format breaks away from "one size fits all."

Various sources indicate that event or tasked based learning is an effective way to link experiences to educational goals (Nunan, 1989; Robinson, 2001; Willis & Willis, 2007). It

affords a crucial moment for introspection with empirical reference and—most importantly—can easily be done entirely remotely using existing technology. Using physical events as references establish an intuitive link to critical thinking.

Mentorship Program

As a part of continuous professional education, the mentorship program will be incorporated in the online interface and available to the total force throughout their career. The Air Force defines mentorship as “a relationship in which a person with greater experience and wisdom guides another person to develop both personally and professionally” (AFMAN 36-2643). This availability of this relationship will not only help officers with their professional development as individuals, but will ultimately will motivate Airmen to be more innovative, efficient, and effective at their jobs. This mentoring program remains voluntary throughout the life of one’s career and includes databanks of mentoring guides and also includes an online database which is available to match a mentor and mentee.

The mentoring program will carry the standard by virtue of its voluntary nature. Adult learners must buy into learning, and if mentoring is forced it will not succeed. The mentoring program exists as a tool rather than a curriculum to help develop our officers. The goal of this program is to go above and beyond basic learning and focuses on not only the professional growth but actually building up the mentee as person (Moeller, Christopher “DEVELOPING LEADERS VIA REFLECTIVE MENTORING”). The hope with this program is to build lasting and vested mentor-mentee relationships that can be developed over time to produce lifelong learners who can think at a deeper level.

The OPME mentoring program will have a databank of mentoring tools that participants can use in mentoring sessions. The databank would include a number of different materials such as conversation starters or even specific subjects in which the mentor may not be the expert. Additionally, the mentorship program would include discussion boards to reach out to the network of potential mentors to seek advice or counsel. These mechanisms will also provide information back to AU. It will provide feedback into the system, providing the trending items, the key topics which need to be addressed, and it will track who is mentoring whom, which will feed back into the career avatars.

The concept of a mentor has to stay broad in this program. A member may have multiple mentors or none at all. A young officer may pursue both an officer and enlisted mentor to aid in his or her development and to stay with those mentors as long as it is beneficial. However, it is not always possible to find a mentor within the confines of his or her base, or a member may not click with anyone within his or her unit. This program would have a method to match mentors and mentees. It will match the mentee’s requirements to an existing mentor database which will be comprised of OPME graduates. Members may choose to have more than one mentor and there is no requirement on how often they hold sessions.

Elective Program

The traditional approach to PME offers a linear progression of knowledge growth. The students do not receive the required skill set to perform optimally in this exponentially changing world (Pearse, 2009). The future leaders of the USAF require a diverse knowledge base to lead proactively instead of reactively. The elective curriculum will develop the Total Force’s cognitive diversity and human capital to sustain the USAF’s intellectual competitive advantage into the future.

AFPD36-70 paragraph 1.2.2.2 states Cognitive/Behavioral Diversity are the “differences in styles of work, thinking, learning, and personality” (SAF/MRD, 2010). Human capital is the collective skill, knowledge, or other intangible assets of individuals that can be used to create economic value for the individuals, their employers, or their community (dictionary.com, 2015). The USAF must expand its cognitive diversity and human capital to continue to be the greatest Air Force in the world.

When the student starts the Core Curriculum, he or she has the opportunity to select from a list of Air University (AU) approved and accredited elective degree plans (see Figure XX and Figure XY for an example and timeline). The degree plans are wide in scope, but will increase the Airman’s cognitive development and career marketability. However, the student may wish to enroll in another degree plan not recommended for his or her Air Force Specialty Code (AFSC). To tap into the intrinsic motivations of adult learning and increase human capital and cognitive diversity, the Airmen may select any degree plan he or she wishes (Broughton) (Taylor & Hamdy, 2013).

Pilot	Intel	Maintenance	Contracting
MBA	MBA	MBA	MBA
Proj Mgmt	Proj Mgmt	Supply Chain Mgmt	Proj Mgmt
Operations Research	International Relations	Economics	Finance
Economics		Quality Control	Economics

Figure 1

Cycle	Core	Elective	Result
Cycle 1: 4 years	12 hrs (ASBC)	0-24 credit hrs	Potential for degree or certificate
Cycle 2: 8 years	12 hrs (SOS)	0-24 credit hrs	
Cycle 3: 12 years	12 hrs (ACSC)	0-24 credit hrs	
Result: MA in Military Studies			
Cycle 4: 16 years	12 hrs (AWC)	0-24 credit hrs	Potential for degree or certificate
Cycle 5: 20 years	12 hrs	0-24 credit hrs	
Cycle 6: 24 years	12 hrs	0-24 credit hrs	
* Up to 2 masters degrees (one will be from core curriculum)			Figure 2

Airmen may have an advanced degree or not be interested in one specific degree plan, so to assuage that factor, they may choose to get an AU approved professional certification, such as Air Force Smart Operations 21, Six Sigma, an Air Force Institute of Technology distance learning certification, etc. Also, Airmen may enroll in any class they are interested in and not pursue a degree or certification. Furthermore, Airmen may skip the Elective Curriculum altogether: it is not mandatory. There is no timetable for when Airmen must complete the degree. The degree plan may be paused at any moment to accommodate life and its unforeseen events. The goal of the elective curriculum is flexibility, to encourage knowledge growth and lifelong learning.

AU should solicit assistance from AFIT, the Air Force Academy, or internally for available degree plans and curricula. All others should be ported through existing or in some cases new partnerships from an above average institution. “Although a rose is a rose is a rose, a degree is not a degree is not a degree” (Mucyk, Neal, Kankey). “It is unlikely the Air Force can afford much longer to ignore the quality, content, and relevance of the degrees that its members acquire” (Muczyk, Ely, & Kankey, 2013). If the USAF creates an admirable degree program for its total force, Airmen will choose the free education instead of the partially paid tuition assisted private institution.

Personal Interaction Milestone

One of the key components of developing a career long, non-resident OPME approach that fosters creative and critical thinking while at the same time motivating and providing value to both the individual and the Air Force is the Personal Incentive Milestone (PIM). The PIM is the proverbial “carrot on a stick” encouraging the individual to complete each cycle’s core curriculum because at the completion of the core the individual can then create his or her own PIM. While absolutely no requirement will exist for the individual to complete a PIM the desired intent is that every member sees the value of the PIM and wants to participate because of the intrinsic value within the PIM experience.

So what is a PIM? In simple terms a PIM manifests itself as a one to two week, individually designed and Air Education and Training Command (AETC) funded temporary duty (TDY) allowing the member an opportunity to recharge and invigorate the mind, to broaden his or her perspective, and grant opportunities that focus on personal and professional wants, desires and preferences. The fundamental value of a PIM is the individual member’s ability to do something of intrinsic value for him or herself. By granting an opportunity to carve out time in his or her career there is space for introspection, professional development and personal fulfillment. The PIM acts as a real fusion of PME values in regards to personal growth, self-fulfillment and whole person development.

One way to view the PIM is to see it as a mini-sabbatical. For example, a chaplain wants to explore a certain aspect of another denomination, a different faith culture and/or theological practices. Imagine a system where that chaplain could go to the Vatican and shadow a priest or curator for a week, or spend her/his time shadowing key executives in a major non-profit service agency. Returning from the PIM the chaplain will bring a fresh vigor to the office along with renewed zeal and commitment the mission.

The above example could replicate itself with a Logistics Officer setting up a PIM at an Amazon fulfillment center or a Pilot engaging with UPS or a corporate carrier learning the business side of the operation. If a member wants to experience something totally outside her/his career field the sky is the limit. Experiences with Disney, Starbucks, Google or whatever company the member could arrange a PIM with would fit within the construct of the PIM.

Finally, but definitely not least, if the member wants to widen his or her military perspective PIMs could be arranged at the MAJCOM and HAF levels of the Air Force or even within our sister services, fostering development in the joint environment. The above examples only begin the scratch the surface of the plethora of PIM possibilities.

Over time as the PIM program develops a database of amiable companies, institutions and venues would be created and accessible through the member’s avatar platform thereby allowing individuals an easier and more efficient way of arranging the experiences. All the essential, personal preparation--networking, looking for opportunities to explore, arranging the time/location, administrative requirements, etc.—would be the responsibility of the member. Over the last couple decades corporate America has see the value for one type of PIM experience—shadowing. Shadowing is the practice of a junior level member pairing up with a more senior member and “shadowing” them for a pre-determined period of time ranging anywhere from a day to a week or more.

One such company that has incorporated, and seen quantifiable, beneficial results, of a shadowing program is Cisco. In 2009 Cisco’s Executive Shadowing program began as a grassroots effort to develop women employees by pairing them with talented Cisco executives.

A concept that started in only one local area (San Jose) blossomed to over 10 metropolitan areas throughout the United States and around the globe. (Catalyst 2012, 1)

Cisco's internal culture, which celebrates giving back to others, helped facilitate their shadowing program. Since giving back of individual time within the organization, as well as the global community, is an important cultural company value many executives were enthusiastic about participating. The program has not only benefited the participants but also the executives who discovered the benefit of giving their time and reflecting upon and sharing their leadership philosophies, how they handle challenging situations, and/or lead their teams. (Catalyst 2012, 4)

Cisco employees who have participated in their shadowing program have reported feeling more confident asking for what they want during the next step of their careers, developed a better sense of achievements they want to make in their careers, and knowing how to communicate with senior leaders within the company (Catalyst 2012, 5). The Air Force seeks these qualities in their budding leaders. Some keys to make a shadowing program work as developed by Globe Career's Leadership Lab are 1) authenticity 2) two-way learning experience 3) opportunity to mentor future leaders 4) part of a bigger commitment to professional development ("How to make job shadowing work" www.theglobeandmail.com 9 Dec 14, 2-3)

Shadowing exists beyond corporate America and has already been done on a smaller scale in the United States Air Force. PIM can draw upon the success of the Maxwell-Gunter Airmen Shadow Program created in 2011. This program afforded junior enlisted Airmen an opportunity to shadow a command chief, receiving positive reviews from both the junior enlisted Airmen the command chiefs. The program directly impacted the member's awareness of the "big picture" and offered the highest level of mentoring available. ("Shadow program gives big picture view to Airmen" <http://www.maxwell.af.mil/news/story.asp?id=123248651>)

PIMs allow the member an opportunity to step out of their day-to-day, operational environment giving her/him an opportunity to recharge their overall Airmen Fitness domains, gain a broader life perspective while expanding their professional and personal horizons. In affording a PIM the Air Force is tangibly expressing to the member that he or she is a valuable part of the team, reinforces the importance of the whole person concept and communicates care, not only to the member as an officer and leader but as a person as well.

Delivery Method

A modern delivery method remains crucial to achieving motivational ends. New participants in any OPME program will bring experience in interactive and convenient distance learning programs. Even traditional collegiate programs have blended learning models which provide the student with remote content to supplement in person learning.

Delivering curriculum in a way that matches a student's preferred learning type (visual, audible, etc.) engages critical and creative thinking. Current technology already heavily utilizes multi-layer multimedia approaches to learning. The gaming industry and some open source learning sources have been identified as being models of a multi-format, multi-domain/platform and social technology enabled education. The idea of harnessing the power of these models proves obvious and obligatory to any potential educational program that will have to meet a new generation of students.

For multi-domain PME to remain an effective learning tool, the online service must mirror currently used software by leading universities with potential for rapid modernization. Online learning, ideally, runs on a single domain in which a student can log on anytime and anywhere. This online access will exist on multiple platforms such as SIPR, NIPR, JWICS, personal computers, smart phones, and tablets. The goal stands that military members will have direct access to OPME tools no matter where they find themselves.

OPME provides the distinct advantage of the ability to multi-link with civilian universities and even international partner organizations. The CORE curriculum will have accreditation and transferability to degree programs at other universities. This partnership will allow military members to transfer credits and possibly work towards degrees from other universities while completing OPME. Currently, multiple coalition partners conduct operations on an international basis with while participating in various activities. OPME provides a linkage between our international partners and military members through a virtual setting. This integration would help strengthen cognitive diversity throughout the work force.

It proves challenging to develop and employ which result in long lasting retention. Recent research shows that practice in retrieving learned information effectively reinforces this objective.

According to one study, students who devoted most of their time to active recall performed best on their exam. (Jeffrey D. Karpicke, Retrieval-Based Learning: Active Retrieval Promotes Meaningful Learning, *Current Directions in Psychological Science* 21(3), 157-163, 2012) The first group only studied the material for four periods. The second group studied the material during the first three periods and devoted the last period to active recall. The last group used only the first period to study the material and used the remaining three periods to practice active recall. Weeks later, the instructor asked students to recall what they had learned. The first group recalled 40% of the material, the second group 55%, and the third group 60%.

The study shows that the more time students spent practicing retrieval of information, the better their retention. The online format could easily incorporate more retrieval practice. For example, every few minutes, the video lecture would pause, prompting students to answer quiz questions to continue further. By completing short quizzes, students practice retrieving the information they learned and also receive instant feedback on their answers. To incorporate two levels of recall, the training could require students to develop an outline of the material and then recreate it from memory. They could then reference the recreated outline to answer quiz questions.

Bringing a real world experience from an institution to the doorstep of the individual will advance distance learning. With current technology and research, we can accomplish this in an affordable and effective manner, utilizing interactive solutions. Currently, the military uses interactive Computer Based Training that attempts to educate the individual during annual training. What if the Air Force took this online interactive piece a step further? The training can utilize virtual avatars to tie in multiple human resource functions while additionally providing training to current and future leaders of the United States Air Force.

The human resource aspect of the digital avatar ties together several current databases utilized by the Air Force. MyPers, Virtual MPF, and an Airman's development plan could all be incorporated into a virtual profile (avatar) to track an Airman's career. The Nintendo Wii currently utilizes this approach in creating a profile called a Mii. Regardless of the game, this profile sticks with the user. It keeps a running tally of several accomplishments. Examples of accomplishments could include degrees earned, PME attended, languages, awards and positions held. Beyond its utility as a one stop shop for a person's portfolio, the Air Force could also utilize an individual's profile as a search function to find someone for a very particular job such as a Regional Affairs Liaison.

This virtual avatar program would prove useful. An aircraft simulator closely approximates the current potential of this medium. Pilots must perform tasks in a simulator that would be dangerous or unrealistically expensive in training flights. Ideally, the Air Force would apply this same approach to Professional Military Education through utilizing case studies in various virtual scenarios in which a person could test his or her leadership skills. The lessons incorporate some of the annual computer based training and instead of learning about suicide prevention students could utilize leadership tools in a given scenario. Perhaps leaders could practice giving feedback or counseling to an Airman who has experienced difficulties or brushes with the law. According to Annetta, gaming and simulation environments support a learner-centered education, whereby learners may actively work through problems while gaining knowledge through participation (Annetta et al, 2006). Simulation would provide a realistic experience to the individual. Realistic feedback and counseling sessions are difficult without a visual component.

To our advantage, the technology exists the Air Force already utilizes it to some extent, including the utilization of *Second Life* for very similar case studies. This approach provides real world and problem solving scenarios that would benefit Professional Military Education through cost effective distance learning. Currently, Second Life is available for only \$1,000 per region with a monthly maintenance charge of \$295 (Arenas, 2013). This cost effective method could beneficially replace the expensive in residence programs. While it can not totally replace the networking benefits, it could significantly aid in officer development.

Utilizing real world scenarios demonstrating good or bad leadership traits through the programming would help the individual completing the training. Further, he or she could disseminate the lessons to coworkers and fellow Airmen.

The Air Force's shift to Virtual Flag training operations provides another good example of current utilization of this technology. The Air Force finds it beneficial to conduct large scale Flag exercises over simulation networks to reduce the use of precious resources such as fuel and structural wear on airframes. While the cost savings might not be as vast in this case the same principles still apply: multiple realistic exposures to situations helps prepare individuals for real world events.

Digital Avatars pave the way for the future regarding professional military education. The career avatar can fulfill several human resource functions to include record storage and search applications. The avatar could serve in simulated interactive scenarios that help a leader train and grow. Additionally, the technology already exists in cost effective platforms. This interactive, cost effective tool brings real world Professional Military Education from the classroom to the doorstep of every Airman in the Total Force structure. This program creates a win-win for Airmen and the USAF. Airmen have an easily accessible multi-domain platform for PME anytime and anywhere on any device. A one-stop-shop avatar tracks their education and career progression.

Experiential Training

Experiential training, and in person leadership exercises play an important and productive part of Professional Military Education (PME) and these elements can continue as the Air Force transitions to a distance learning model. By taking advantage of innovative ideas and technologies the Air Force can offer these learning experiences in a multitude of different ways enhancing and building on the current value added. Air University can offer recurring in person events at each instillation led by an AU certified Facilitator and the opportunity to interact with members of the Total Force worldwide with the use of emerging Virtual World technologies. Each member continues to gain value by engaging in experiential training with a transition to this new PME approach.

Specifically, experiential training will consist of portions of the current in residence program dealing with team leadership activities. They consist of Team Leadership Problems (TLP), Team Challenges (TC), Field Leadership Exercises (FLEX), and Project X. Below the reader will see a brief description of each and why this construct includes each activity in the curriculum. These descriptions come directly from the materials provided to students of the in-residence program produced by AU.

Team Leadership Problems and Team Challenges (TLPs/TCs).

TLPs and TCs provide opportunities to observe various leadership aspects demonstrated by each student to solve problems in a group environment. These events also help students analyze group processes and give ideas to help improve student abilities. Students will experience both the benefits and difficulties found in group processes. Students can establish what the mission is, analyze the data, brainstorm solutions, and test a solution before actually doing it. While doing this, students can demonstrate time management, conflict resolution, organization skills, communication skills, and other skills to prepare as a team for the task. TLPs and TC give students an opportunity to apply the transactional and transformational concepts of the Full Range Leadership Model. [A leadership model taught during the course of the in residence program]. A leader needs to have these skills regardless of the mission at hand. The mission may be a long-term project with plenty of time for planning and execution. Other missions require the ability to lead in a time-constrained situation with limited information. For example, an Air Force officer may be tasked with putting together a Staff Summary Sheet package in an hour or with fixing a short notice maintenance problem. TLPs/TCs give each student experience in this type of situation and also allow flight commanders to analyze each student's application of leadership, followership, team building, problem solving, risk management, and communication concepts. Through analysis and associated feedback, students should improve skills at leading, following, team building, problem solving, and communicating. The TC will be planned and executed concurrently in a dynamic environment involving communication challenges and/or moderate physical exertion.

Field Leadership Exercises (FLEX)

The FLEX [is an event] where flights will compete against another flight in a field activity designed to illustrate the lessons from the Warfare section of the curriculum. In addition to potential mission points, flight members will be evaluated by their flight commander on their

ability to apply these lesson objectives, exercise leadership/followership traits in the team environment and achieve program outcomes.

Project X

Project X is a physical and mental challenge that exercises leadership, followership, team building, problem-solving, and communicating in a temporally constrained environment. [The events are held in an obstacle/confidence course]. The Germans developed a similar course to evaluate army officer candidates before and during WWII. The British now use a similar course to help determine officer leadership potential of candidates for Sandhurst and the Royal Air Force Academy. There are courses patterned after Project X at Lackland AFB, Ft. Benning, and the Air Force Academy. These courses are also used primarily to teach leadership concepts. Project X provides each student an opportunity to accomplish a mission in a time-critical situation, which includes conducting a critique, as either a leader or a follower. Flight Commanders use Project X to observe the various leadership, followership, teambuilding, problem solving, and communication aspects each student demonstrates to solve the problem in a time-pressured team environment. Students will experience mental and physical pressure both as a leader and a follower in various tasks. It is another opportunity for students to learn in a challenging environment. Project X allows each student the opportunity to employ [Professional Military Education theories and techniques] in a low-risk environment. The added pressure of time constraints requires each team to perform at its peak level. The scenarios provide a mental frame of reference to develop assumptions and help teams devise a plan of action. The intent and value of these events is detailed above. It is important to note that while that answers who, what, and why, we have not addressed the when, where, and how. It is the later that is the essence of the transition to a distance learning model with new opportunities for a broader more persistent educational experience that is available to all members of the Total Force.

In person experiential training fills an important role in education and evaluation that has been used for the past 60 years by the Squadron Officer Collage (SOC) with great success. Students can take advantage of this same opportunity at each instillation with just a small investment in physical materials and project management effort. This group intends to provide the opportunity to participate in Team Challenges, Team Leadership Exercises, and Field Leadership Exercises where the majority of students live and work. Each base will have the equipment and a cadre of Facilitators who can coordinate multiple opportunities throughout the year, thereby allowing each student at the base the chance to participate as his or her operational schedule allows. Each base can set a schedule that will fit for its current complement of students.

One may ask how the Air Force generates a pool of Facilitators for these events. These individuals will complete an AU course which will teach them the nuances and techniques necessary to provide guidance and follow up feedback during and after the activities. While this training does not comprise an accredited portion of the Core Curriculum, it fulfills a requirement to complete the recurring PME for each four year phase. As it does not generate credit awarded toward a post-secondary degree an AU Facilitator can lead the training.

The fielding of the Facilitators can take a phased approach. To achieve an Initial Operational Capacity (IOC) AU can tap into previous Officer Training School (OTS) and Squadron Officer School (SOC) instructors who already have familiarity with the methods and

programs and have since returned to the operational environment. Simultaneously, AU can also start immediately identifying those in residence who demonstrate capability to conduct these events. AU can then provide these officers with an in residence elective that will allow them to return to their operational assignments with the knowledge and know-how to guide teams of students. To ensure that AU selects the right individuals, it can tap into existing programs that recognize those who embody the Air Force Core Values. The Distinguished Graduate program and the fledgling SOS Alumni Program stand as fine examples of reputable candidates.

Facilitator training could also take place online through the elective portion of the distance learning model. The individuals could highlight themselves through superior performance during the course of completing the core curriculum or even nominations by their unit commanders.

While AU should set the program objectives and requirements, the actual management needs to take place at the base level. The base education (Formal Training Office) can manage the program and ensure compliance is maintained with the installation commander acting as the overall authority, thereby removing the burden from AU to provide more people at the headquarters level to field the program and ultimately maintain it.

An emerging technology known as the Virtual World offers opportunities and growth potential to experiential instruction never before possible. Right now at SOC, faculty members like Dr. Fil J. Arenas have pioneered experiential training opportunities through the use of a system called Second Life with nearly limitless potential while remaining affordable. Like the aforementioned example, phased implementation would bring this capability to each base and attain IOC. Bring the learning opportunity to the students, thereby reducing costs over the long haul. More importantly, the opportunities these advances offer are endless and extend well beyond the potential for instruction of experiential activities. Below the reader will find a brief description of how this technology could apply in the case of experiential events. Please note that the fielding of this tool would allow access to the Total Force in a manner not currently possible. Students from around the world could work together in real time using their avatars (see previous section), sharing different cognitive perspectives and enriching the learning process in a way that closely mirrors the in residence program.

SOC has already created a number of Virtual World Project X events that can include any number of participants who find themselves geographically separated. While AU can offer the opportunity to train and learn through events like Team Leadership Problems and Team Challenges at the installation level, it cannot create the physical obstacle course that is Project X at each base in a cost effective way. Safety would also remain a concern. Through the use of Second Life AU has the opportunity to offer this training to each student worldwide at low cost. And, perhaps even more interestingly, this construct provides an avenue to continue development of new problems, challenges, and situations. No student should ever see the same challenge twice.

Initially, the Air Force should make a substantial investment to bring the program to a state capable of offering this level of training worldwide to the Total Force. The physical equipment actually costs very little, with \$1000.00 per unit and less than \$300 per month for maintenance and upkeep. These costs should decrease as the number of units ordered increases.

A transition to a state-of-the-art distance learning model offers many advantages. The experiential piece provides a valuable component to the curriculum and can continue to play a major role in PME. In fact, the future holds the opportunity to increase the ways and means in which AU offers this training to the leader of tomorrow.

Conclusion

Air Force Basic Aerospace Doctrine states, “Success in war depends at least as much on intellectual superiority as it does on numerical and technological superiority” (Drew, 1992). As an investment, quality education provides unbeatable value that benefits the employee and employer (Broughton). The Air Force will benefit by crafting a retainable and intellectually superior Total Force. Neil Chalofsky, a professor at the George Washington University, says “learning in the workplace is critical to an individual employee’s growth and effectiveness, and to the organization’s growth, employee retention, and innovativeness.” (Chalofsky, 2005) The creation of knowledge directly correlates with enhanced product development and software development capabilities, innovation, quality of problem solution, and overall effectiveness at the team level (Mitchell, Boyle, & Nicholas, 2009). Currently, no studies list a dollar figure of educational return on investment. However, when AU creates this program, TA costs will decrease. Students will become more attracted to a free education over a partially paid education with the same outcome: a master’s degree. In addition, this model provides an avenue for those with advanced or professional degrees to pursue electives for continuing education in their chosen discipline, such as a JAG officer obtaining his or her LLM. MIT professor and popular author Dan Ariely concludes, “there is an increased valuation of items priced at zero.” (Shampan'er & Ariely) By fostering knowledge growth and building a win-win PME program, the USAF will lower its educational investment, increase cognitive diversity, and maximize its most valued asset: human capital.

Bibliography

Broughton, R. (n.d.). *Dr. Deming Point 13 Institute a Vigorous Program of Education and Retraining*. Retrieved 4 23, 2015, from Quality Assurance Solutions: www.quality-assurance-solutions.com/Deming-Point-13.html

Cholofsky, N. (2005). Reshaping the Way We View the World. *TD* , 54-55.

dictionary.com. (2015). *human capital*. Retrieved 5 12, 2015, from [http://dictionary.reference.com/browse/human capital](http://dictionary.reference.com/browse/human%20capital)

Drew, D. (1992). *Basic Aerospace Doctrine of the United States Air Force* (Vol. 1). Washington DC: Department of the Air Force.

Mitchell, R., Boyle, B., & Nicholas, S. (2009). The Impact of Goal Structure in Team Knowledge Creation. *Group Process & Intergroup Relations* , 12, 639-651.

Muczyk, J. P., Ely, N. M., & Kankey, R. D. (2013). AFIT's Graduate Education - The Air Force's Intangible Competitive Edge. *Air Force Journal of Logistics* , 24-36.

Pearse, J. W. (2009). *Officer Education: Preparing Leaders for the Air Force of 2035*. Air University, Air War College. Maxwell AFB: Air University.

SAF/MRD. (2010). Air Force Policy Directive 36-70 . In SAF/MRD, *Diversity* (p. 2). United States Air Force.

Shampan'er, K., & Ariely, D. *Zero as a Special Price: The True Value of Free Products*. MIT. Cambridge, MA: MIT.

Taylor, D., & Hamdy, H. (2013). Adult Learning Theories: Implications of Learning and Teaching in Medical Education: AMEE Guide No. 83. *Medical Teacher* , 35.