Educating the Acquisition Workforce Utilizing Social Media & Other Alternatives

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ABSTRACT

Shrinking travel budgets, limited physical space and increased student throughput place heavy burdens on training providers to utilize alternative delivery approaches that are effective. The Defense Acquisition University (DAU) is addressing these issues by developing and implementing learning assets conducive to a non-classroom setting. This represents a paradigm shift from traditional methods to train the Department of Defense (DoD) acquisition workforce. The use of social media tools has been identified as a viable solution; however preparing instructor staff in the use of these tools is necessary. This paper examines the use of non-traditional course delivery systems to build immersive training experiences that promote student interaction and engagement while addressing the throughput problem. Two courses, each with their own unique learning outcome requirements, were developed. Both were piloted using delivery tools available to DAU specifically, Socialtext, Blackboard, and Defense Connect Online (DCO).

The delivery method selected for the specific courses allowed students to apply what was being learned in different ways depending on the intended student outcomes. One course design (primarily utilizing Blackboard and DCO as delivery structures) delivered at a synchronous pace, allowed for the immersive engagement of an authentic problem within a team structure so that instructors could monitor student engagement regardless of student physical location. The other course was delivered via Socialtext. This design provided immersive self-directed learning experiences such that learners could examine and utilize a variety of social media tools within the tools themselves at an individual pace and desired depth of understanding.

The authors present the considerations and methodology used to design the courses with appropriate student activities that allowed for transfer of learning within the capacities and constraints of the tools. Additionally, pilot results demonstrating the effectiveness of the courses from student and instructor perspectives and next steps for course revisions will be presented.

ABOUT THE AUTHORS

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DAU's MISSION

It is the mission of the Defense Acquisition University (DAU) to provide a global learning environment for the Defense Acquisition Workforce. At the heart of the learning environment is the Acquisition, Technology, and Logistics (AT&L) Performance Learning Model (PLM), a learning and development architecture that extends the learning experience beyond the traditional classroom instruction to a wide range of learning solutions- many available 24/7. The PLM also extends the reach of DAU beyond the Defense Acquisition Workforce to our industry partners and supports life-long learning engagement with the workforce. DAU provides support via the four key components of the PLM:

- Training Courses including distance learning and classroom training, case-based training aimed at developing critical thinking, and immersive learning technologies aimed at simulating real work experiences
- Mission Assistance including onsite consulting, targeted training products, intact team training, and Major Defense Acquisition Program engagement
- Continuous Learning opportunities providing self-paced, relevant training modules available 24/7
- Knowledge Sharing online resources available 24/7 that provide access to acquisition information, communities of practice and allow the workforce to network and collaborate with each other

Figure 1. DAU's Performance Learning Model.

This paper examines the use of non-traditional course delivery systems through the lens of two different course constructions. The first, Faculty Professional Development (FPD) 301, is a faculty professional development course centered on the use of social media and knowledge sharing tools with a goal to provide an immersive experience for faculty and staff that might not have a great deal of experience using such tools. The second course, Program Management (PMT) 257, is designed to provide students with practical applications of program management tools and techniques as well as opportunities to properly demonstrate their use to make informed decisions within a program management scenario.

Learning organizations considering exploring an enterprise level integration of social media and other delivery platforms into their curriculum can utilize the findings of this paper to determine the best ways to fully engage the student. At minimum, the authors suggest that faculty and staff are provided the opportunity to experience the social learning and alternative delivery tools in the same manner in which their students will be asked to learn. Once familiar with the environments, the authors believe that social media tools and platforms such as the Defense Connect Online (DCO) can be immediately utilized in targeted training opportunities, capstone activities, training to learn to use and master particular tools and other team or apprentice/master learning opportunities.

THE DEVELOPMENT OF FPD 301

Social media tools (wikis, blogs, and social networking sites) are a ubiquitous part of life that has emerged as powerful catalysts of political and social change. Social networking sites were widely accredited with helping to depose an entrenched Egyptian dictator. Less significant, but nevertheless remarkable, the ascent of a previously unknown thirteen year old (Rebecca Black), whose viral YouTube video "Friday" (http://www.youtube.com/watch?v=CD2LRROpph) brought her world-wide scrutiny and celebrity in the space of just weeks, speaks to the extent of social

media's reach. The power of the "read/write" web and its transition from "read only" was utilized early within the journalism, political and business realms to transform their operations. It is reasonable to expect that educational organizations should follow suit as social media are truly constructivist tools that can support learning. By using these tools, members contribute to the wider body of knowledge and their democratic nature supports a wide variety of learning styles (Richardson, 2006). The far reach and exponential capacity of social media tools warrant a close examination of the opportunities they afford to learning organizations. To become and remain in sync, these learning organizations must also prepare their instructor staff to optimize the use of these tools. DAU began this effort during the fall 2010.

Course Goals and Purpose

FPD 301 was developed to provide DAU faculty with a good foundational understanding of social media and knowledge sharing tools, and the opportunities afforded by the use of these tools in support of the DAU mission. Understanding how to best utilize and leverage these tools is a needed skill set for DAU faculty and staff to be able to facilitate internal collaboration, aid external communication, or as an alternative method to better engage and support student throughput. This need was supported by an internal review of DAU faculty competencies in calendar year 2008. During the internal review, the members of the working group examined the four components of the AT&L Performance Learning Model (PLM): training, mission support, continuous learning, and knowledge sharing to determine if skill gaps existed. The results of the review concluded that there were gaps in faculty skills for knowledge sharing and this provided the impetus for the FPD 301 development.

DAU engaged with CSC to develop FPD 301 as a 6-8 hour online course with the specific target audience of the DAU faculty and staff. The desired outcomes were to teach the fundamentals of a variety of social media tools (i.e. wikis, blogs, microblogs, social networking), and DAU specific knowledge sharing assets. The course design structure includes a simple explanation of each of the tools, DAU specific use cases, tool use best practices, and a wide array of references to allow for deeper exploration, as well as (and especially) practical hands-on exercises in the use of each tool. This structure is based on the constructivist theory of education, whereby learners are presented with problems of emerging relevance. As supported by the literature, the authors discovered that the nature of the challenges posed to students greatly impacted the level of depth to which the students engaged (Brooks & Brooks, 1993). As a result, our concept was to build an interactive course that would actively engage and motivate the learner, and allow the learner to set the pace, direction, and desired depth of understanding. In addition, due to the rapidly changing content within the course the ability to continuously and easily update the content was critical.

Therefore and as a result, four key factors weighed heavily in the course design:

- student engagement; students would not have to wait to begin using the tools
- immersive learning; students shall "learn by doing" and use the tools to learn the tools
- self-directed learning; students would NOT be subjected to a "page-turner" course
- rapid content update; the course was developed and delivered via the Socialtext tool (as opposed to delivery via the LMS)

Course Design and Delivery

In order to achieve these design goals, we quickly realized that our traditional online course delivery system was inadequate. The traditional online learning courses did not offer the flexibility to easily change content nor did it allow for the kind of active student engagement and immersive learning that provided the capability of the student to learn by doing. In reviewing our options for course delivery, we came to the realization that developing and delivering the course in a social networking environment offered several distinct advantages in meeting our course design goals. Socialtext, a social software platform, provided an inherent Web 2.0 immersive learning environment and took advantage of the many features available within the application to deliver content and support a number of hands-on learning activities. While students engaged in the learning activities, the instructional and collaborative value of a knowledge sharing environment was immediately evident. Using the Socialtext environment, students were able to experience firsthand sharing and collaborating with each other. Interestingly, student collaboration, though unexpected and not part of the course design, happened naturally during the pilot, and can be attributed in large part to the Socialtext environment in which the students were working. This phenomenon is supported by literature; the constructivist design allows for multiple entry points for students to engage and utilize their unique perspectives to interpret ideas, (Brooks & Brooks, 1993). Examples of student interaction are shown in Figure 2 and demonstrate the added benefit of using a tool that enables learning from each other.

Figure 2. Examples of Collaborative Learning.

Utilizing Socialtext as the delivery mechanism was vital. It allowed for an immersive learning environment, which required students to gain practical experience in actually using the social media tools via exercises designed to be both fun and engaging. The design choice was grounded by the notion that learning presupposes a specific social nature and that learners will grow into intellectual level of those around them, (Vygotsky, 1978). One exercise developed by the designers required the learners to create a wiki of their favorite sandwich including the sandwich history, preparation techniques, and best place to get the sandwich. During the course pilot, students actively engaged in the exercise. Finding it non-threatening and fun, it allowed the students to be creative and immerse themselves in the activity of creating and editing a wiki page. Exercises and activities were designed to reinforce the learning by engaging the students in the use of the various tools by creating blogs, wikis, microblogs, and editing, commenting and signaling comments.

Though not all exercises were mandatory during the pilot, student feedback unanimously advised that we make mandatory all exercises and activities for each of the tools. By making the course fun and engaging via interactive practical exercises we ended up motivating the students to explore and learn more in a collaborative manner. The notion that a collaborative learning environment (as opposed to the inherent competitive nature of more traditional environments) supports learner motivation and increases the effectiveness of the learning activity is supported by literature. Ford (1992) specifically addresses the ineffectiveness of competitive goal structures within a learning environment and refers to them as "disturbing" (p. 227). This is based on the fact that individual and competitive goal structures do not provide relevant training, even within performance-base contexts, which is contrary to common belief. A non-collaborative, competitive environment simply serves the purpose of identifying winners, losers and those who chose not to participate in the activity.

Though the self-directed design of the course did create some initial frustration during the pilot, by the second day, students seemed to overcome this hurdle and became more comfortable with navigating the content, and more at ease with charting their own learning experience. Several of the comments (Figure 3) received during the pilot attest to an initial level of frustration.

Figure 3. Quotes from Students as They Overcome Initial Frustration with Course Structure.

The self-directed nature of the course design also allowed students to explore the topics at their desired depth of understanding. This unique opportunity triggered the following comments (Figure 4) from students:

Figure 4. Examples Illustrating the Levels of Student Exploration.

Interestingly these comments seem to reveal and suggest that, as learners, we tend to get stuck in a learning paradigm of "tell me what I need to know and give me the roadmap." This represents the traditional curriculum model that most students are familiar with and experience through a life-time of schooling. The expectation is that we will be guided to what it is we are expected to learn. In the realm of online courses this often takes the form of "page turners". Students click through a sequential curriculum structure that provides few opportunities for exploration and pursuing items of interest. Anecdotal evidence suggests that students find them boring and difficult to produce transfer of learning; but it is the paradigm for which students are most familiar. Ironically, we believe that because the FPD 301 course didn't follow the prescriptive format, this was a source of some of the frustration exhibited by students on the first day of the pilot. The expected ("boring") structure simply was not present. Instead, and as supported by the literature, the course took on the element of "story". Luce (2005) suggests that the inclusion of a story improves the

student retention because it allows the student to make a conclusion in their own life and tie the story to their performance. The social media tools presented in FPD 301 support this notion completely; each of the entries by the students contributes to a collective story of the learners' performance. Further research in the area of the completion of academic tasks by Munns, et al. (2006) at the University of Western Sydney have quantified a key difference in student participation; specifically as being *in task*, not just on task. Specific indicators of high content absorption would be students wishing to continue beyond the end of a lesson, or not even noticing the lesson had ended—what Csikszentmihalyi (1990) has described as being in ''flow''. During the FPD 301 pilot, there was evidence of flow; many of the students commented that they were probably spending more time on the activities than they should- an interesting comment; and begs the question, how is it possible to spend "too much time" learning?

Feedback and Findings

The self directed construct of the course coupled with the necessary interface between Blackboard (DAU's course management system) and Socialtext created navigational issues which led to a great deal of student frustration at the start of the course pilot. Though the bulk of the course content resides on Socialtext, in order to comply with the administrative aspect of the course, students were required to access Blackboard and then launch the course from Blackboard. Blackboard was used to support the pre-test, the course overview (including an introduction to Socialtext), and the capstone. In addition, Blackboard was used to track and monitor students progress in completing course exercises. The initial design required students to move back and forth between the two systems, and this was confusing for the students and added an unnecessary level of complexity since they had to navigate two different platforms simultaneously. Unfortunately, this resulted in them focusing more time and energy on that aspect than on the intended learning objectives.

To address these issues, we simplified the interface between Blackboard and Socialtext so that students did not have to continuously move back and forth between the two systems. Additionally, we streamlined the course activity instructions and used the Socialtext platform as the mechanism for recording and monitoring student progress toward completing required activities and exercises. This completely eliminated the need for students to report progress and activity in Blackboard and reduced the need for the students to bounce between the two systems. As a result, students were able to focus on the actual course objectives.

This "going against the grain" approach, while sometimes difficult to socialize within an institution, has been practiced within higher education with measured success. Consider the example such as Santa Barbara Community College, where Douglas Hersh, dean of educational programs and technology, essentially threw out his LMS (Learning Management System) in favor of his open-course developed "Human Presence Learning Environment". These actions narrowed the retention gap between face to face and distance learning programs, improved student satisfaction and improved students' academic success (2011).

The removal of the Blackboard component was not an issue in terms of student tracking; Socialtext proved to provide a good audit trail of student activity as their names were freely associated with their activity in each of the platforms (i.e., microblogging, commenting, blogs, and wikis).

Feedback from students recommended that we revise the course overview section to emphasize the self directed nature of the course, better describe the course layout, and the use of Socialtext as an immersive learning environment. Several good options were identified as mediums to prepare and orient the students to the course structure, among them were developing a short orientation video, and convening an online orientation session using Defense Connect Online (DCO).

Conclusions

Overwhelming student feedback supports the following conclusions:

- Interaction and sharing among students contributed to the learning experience
- Practical exercises using the tools engaged the students and contributed to the learning experience
- The self-directed construct of the course allowed for opportunities to explore content in greater depth, even though it was initially a source of frustration

In summary, the non-traditional course design and delivery of FPD 301 with its focus on an immersive learning environment achieved much of our original course design goals and was positively received by students. Based on student feedback, modifications to the course have been made and a second student pilot is planned to gauge the impact of course changes. A final student comment conveys the use of a

constructivist and experiential learning design and its impact on learning.

> *"I like the approach to this course – a semi structured constructivist learning environment. A good opportunity for performance based learning; a "bit" of challenge with the unfamiliar, produces a greater since of accomplishment in adult learners. Good opportunity for performance based learning."*

DEVELOPING PMT 257

DAU has also sought to develop learning assets conducive to a non-classroom setting where students will use the assets from their office spaces or homes in lieu of a traditional classroom environment. The benefits of reducing costs for travel as well as lowering carbon footprints are appealing to the university as well as the organizations that utilize the training offered by it. Implementation of such non-classroom environments is not trivial; the purpose of the course and the nature of the target student audience have to be carefully considered.

Course Goals and Purpose

The overall goal of the PMT 257 course is to enable students to collaborate as integrated product teams (IPTs). To achieve this goal, students must properly demonstrate practical application of program management tools and techniques, apply critical thinking, and make informed decisions using those tools.

Prior to development, the DAU/CSC team worked together to conduct an analysis of existing learning assets and delivery capabilities (DAU-provided, commercially available, and other government-wide available platforms) for their feasibility to be used to host content and tools in a non classroom environment. The delivery mechanisms needed to allow students to analyze content and material to make decisions, develop plans of action, and create documents by utilizing associated program management tools. Security concerns such as firewalls, service constraints such as Navy-Marine Corps Intranet (NMCI), and similar issues were addressed to ensure students could easily access the course materials. It was vital that the course design provide for technical performance considerations and ease of use under these various DoD security constraints.

The integrated course design (i.e. graphics, animation, audio-visual, and other media) addressed and provided the capability for DAU faculty/staff and students to perform and facilitate practical application and decision making skills that an IPT leader needs in a program office. Additionally, the design of the learning assets had to address and provide the capability for the faculty/staff to perform editing and maintenance of the learning assets after they had been produced and delivered. After each of the available alternatives was identified in the analysis phase, each of the alternatives was examined to determine the most viable option for DAU based on cost, technology constraints, ease of use, and the maximum success factors based on the inevitable organizational change management issues and concerns. After reviewing various options, it was determined that PMT 257 would be delivered via a combination of Defense Connect Online (DCO), Blackboard, and teleconferencing and included content interactivity, mini-scenarios, mini-cases, and other media and interaction options. This design choice, grounded in the ADDIE (Analysis, Design, Develop, Implement, and Evaluate) model, provided an engaging, synchronous, non-traditional classroom opportunity to support the learning goals of the course.

Design and Structure

PMT 257 uses DCO as an interactive virtual classroom with collaboration tools, and discussion and polling features. DCO is web-delivered and enables users to have real-time, online meetings and text chat. It also integrates many capabilities such as the ability to share and annotate computer screens, conduct a conference, and broadcast live video from a web camera for efficient and productive online meetings. DCO provides a personal online meeting room in which hosts, presenters, and guests can collaborate via the web in real time.

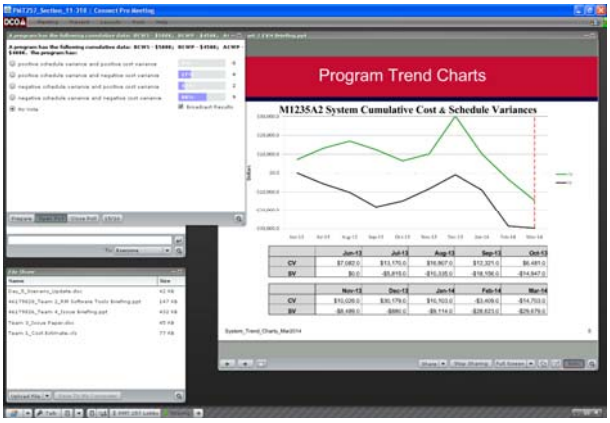

Figure 5. Active PMT 257 Virtual Classroom Using DCO.

Instructors set up the DCO main room and team meeting rooms before class begins and assign students to their team breakout rooms. DCO allows real time

sharing of computer desktop views to facilitate classroom instruction and enhance sharing of information between team members. DCO's synchronous capability enables instructor-led class interactions, such as lectures, debriefs, and discussions, as well as team collaborative working time (via dedicated group "breakout rooms"). Although DCO supports Voice over IP (VoIP), DAU provided a telephone conference line for voice communication in case VoIP was not available for every student. Students with Common Access Cards (CACs) are informed in pre-class e-mails that they must obtain a DCO account to participate in the class. However, even students who do not possess CACs (e.g., NSA students, industry students, etc.) can still utilize DCO as a "Guest" and do not need DCO account.

DCO Polling Feature

The PMT 257 instructors found that the use of DCO increased the level of student interaction via polling, threaded discussions, and other facilitation aids. The polling feature, shown in Figure 6, especially added a lot of value to the class.

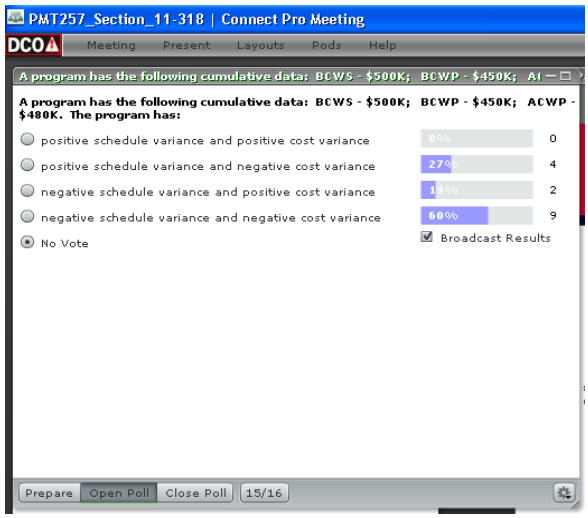

Figure 6. Example Illustrating the DCO Polling Feature.

Polling questions were used to make students focus on critical data and it also ensured that students are actually listening and not away from the phone. Instructors are able to check everyone who responds against the roster and could contact anyone who did not respond, either by e-mail or phone which allowed instructors to have "virtual visibility" of each student. The polling results can be displayed to all the students and remain in DCO until the instructor deletes them; which was useful for review and feedback purposes. This tool alone provided a great improvement to "telecon only" delivery that had been utilized in the past. The design was purposeful and based on the notion of maintaining "social presence"; the feeling of being socially involved in the classroom environment. Based on the literature, especially Gunawardena & Zittle, (1997) participants who felt a higher sense of social presence report higher degrees of learner satisfaction. This factor was considered as highly important in the overall design and architecture of the course.

Other DCO Features and PMT Design Structure

DCO also provides a chat feature where the instructors can text chat with all of the students or with one at a time. During the delivery of PMT 257, instructors utilized this feature in addition to the traditional e-mail and phone communication with students. The immediate and subtle communication method is useful for quick check-in opportunities. Another feature that was utilized was the virtual whiteboard; the instructor can use this tool to post information to the students in the main room and team meeting rooms. Additionally, the students have access to it as well during the development of their course activity solutions.

In order to track student progress and store the vast amounts of course material, the course designers decided to utilize Blackboard for the asynchronous elements of PMT 257. Blackboard contains folders with activity instructions, templates, and their supporting documents, and also facilitates information sharing through threaded discussion boards. Each particular section is set up in Blackboard for instructor access 24 days prior to the class start date with a template containing links to all the student materials and Discussion Boards for each exercise.

Basically, PMT 257 is a five-day facilitated online learning environment (FOLE) course with 14 exercises. It is preceded with pre-work and uses scenario-based team activities that require daily deliverables. Upon enrollment, students are sent a welcome email to inform them of the collaborative "Virtual Classroom" format that will be utilized (DCO, DAU Blackboard, telephone conference calls, and e-mail). Sections have a maximum of 30 students and are divided into 5 six person teams. This aspect of the course was not new; the simulated FIPT activities existed in the original course and were modified only slightly for content. This design choice is well supported by the literature, especially Shank (1990), who states, "People learn best when they are pursuing goals that they really care about and when what they learn helps them attain their goals. The best means of learning has always been experience", (p. 217). Additionally, the literature supports the notion that the

increased social presence has a positive impact on student retention rates, (Pacansky-Brock, 2010).

It was very important to engage the students before the course began so that they recognize the environment they will be working in and the appropriate expectations and course requirements are set up front. The students have access to the *Pre-Course Work* and *Profiles* folders in Blackboard two weeks prior to the class start date. The pre-course work includes presentations on how to use Blackboard and DCO and provides information on how to get a DCO account if they do not have one already. In support of adult learning concepts, students are expected to take ownership of their own learning. As such, the pre-work provides information on the scenario that will be used in class, background information on the program office, and refresher information on topics such as earned value management, scheduling, and related topics that will be used in the course. Even though a great deal of effort was utilized to effectively engage the students before the course began, this was still a bit of a problem area and additional offerings of the course sought to place additional emphasis on "bringing the students on board" before the course actually began.

The developers and instructors utilized the "timed delivery" feature in Blackboard. Students are not able to see any other navigation buttons or course content even though it can be loaded into the system well in advance. For example, on Day 1 of the class, students can only see the navigation for Announcements, Profiles and Pre-Course Work. Each day, the button for that day is "turned on" by the instructor and the exercises for that specific day are released.

It was very important that each exercise was set up on a time-released basis so that students would finish one exercise before starting the next. This method was employed so that full attention and discussion is focused on the current exercise. Students tend to want to preview and start working on and/or "divide and conquer" the next exercise if the documents are available. However, if circumstances require it (i.e. technology delays or students completing work early), the times can be adjusted slightly by the instructor.

Every day begins with a section teleconference using DCO to facilitate sharing and displaying of files and documents. Following the section teleconference, the students break into their teams using an assigned teleconference phone number for the rest of the day to complete the exercises. Scheduled during the day is at least one DCO chat, at the instructor's discretion (generally somewhere around 1300), to allow students to get real-time answers to questions from the instructor. Throughout the remainder of the class, the instructor is available by e-mail or phone.

Course Instructional Elements

The team collaborated closely in the development of various learning assets. For this course, the overarching design structure was framed around the objective to "train the way you work". To develop this design the instructional systems designers utilized animatics and graphic novels to provide the background storyline of an on-the-job scenario. An animatic is a bit like an animated comic strip; it is two-dimensional so the graphic development resources needed are fairly low. However, it is also animated, so important transitions in the story line can be depicted. Graphic novels, on the other hand, are very much like detailed comic strips. They utilize art with high level of realism; the characters look like real people as opposed to caricatures. Because the purpose of the PMT 257 course was to engage the students as part of an IPT, it was necessary to tell the story of "what was going on now". Therefore, each day, the story is updated through the next-in-the-series animatic. Additionally, supporting graphic novels and daily update documents were delivered to the students as resources for their next activity. The instructor shows one animatic each morning to the class on DCO during the teleconference to set up the next stage of the problem. The students view the graphic novels on their own with the other exercise artifacts as needed to solve the next phase of the activity. The animatics and graphic novels are important; while they are fairly short (8-12 frames) the characters within them discuss pertinent situations and provide instructions that students need to complete assignments. There is no audio for either currently, this was a purposeful design decision to reduce extra technology overheard but audio can be added at a future date, if it is deemed to enhance the learning, but at this point, it doesn't seem to have a large value-add.

The PMT 257 course requires that students complete and pass an end of course exam. The course ends with the multiple choice exam hosted on Blackboard and an end of course survey.

Feedback and Findings

Since PMT 257 went live in April 2011, there have been 9 classes offered with approximately 200 respondents to the end of course surveys. What has been somewhat unexpected are the 3 -4 comments, on average per section, saying the course should be conducted in a 'traditional' classroom setting. Examples of student comments are shown below.

- "This class should be held in a classroom environment."
- "The virtual classroom is not effective for this type of class. Team based activities should be executed in a classroom, not online. While cost constraints are a factor in determining the forum for this class, the Level II PM professionals in the DoD need more intensive and in depth training that can only be found within a classroom setting if the format remains team based."
- "Would have been much more comfortable in a classroom setting, working and interacting face-to-face"

The instructors and developers were not surprised by the nature of the comments that indicated a preference for the face to face instructional opportunity. The fact that the number of responses to this effect was fairly low was, however, very encouraging. Despite the comments expressing the desire for a face-to-face classroom setting, the PMT 257 instructors have reported that the quality of the work produced by the students in general is quite high. Also encouraging were the comments from student surveys that indicated the course is meeting its objectives based on the nature of the course design and construct. Students also provided comments on what was most useful to them:

- "The facilitated start to finish of a project."
- "DCO introduction was a big plus."
- "Using DCO & BlackBoard."
- "The exercises and the materials posted to the Blackboard."

Since the end of course surveys are anonymous, the ages and experience levels of the individual comments cannot be determined. It might be advantageous to do further analysis to see if the 'older' students were those that expressed the greatest desire to make the course resident. Closer analysis of the possible modifications to the course is necessary to determine if such modifications will provide improvements to the delivery of the course and if they are reasonable and doable. The first element (to possibly address the social presence factors) the instructors are considering is the possible implications of video in a further course revision. An initial use would be to provide short video to indentify the instructors and students. Also, because the DCO is so well supported with the DoD, the developers believe that pre-recorded "case videos" could be collected and distributed as supporting instructional elements. And, finally, because DCO will support full video conferencing; as video cameras become ubiquitous within the student population, this feature should be easy to implement within the course structure.

With twenty five percent of the federal workforce eligible for retirement and the younger members of the workforce and potential employees more comfortable with the use of current technology trends, it is possible the delivery means is about 'right'. As DAU explores other delivery means and alternative learning options as already identified in FPD 301, integrating these capabilities at the enterprise level to other courses and learning assets will be the next transformation and evolution in the curriculum development process. DAU should find itself on the leading edge of providing the acquisition workforce the most efficient and effective learning assets through multiple media options to provide the necessary skills and knowledge to acquire products and services to the nation's warfighters at the best cost of the taxpayers' money.

As part of DAU's 2011 Strategic Plan, the mission of the university is to "provide a global learning environment to support a mission-ready Defense Acquisition Workforce that develops, delivers, and sustains effective and affordable warfighting capabilities." To accomplish this, both the DAU faculty and the Defense Acquisition Workforce they teach must receive high-quality and relevant training so that they can perform their respective duties more effectively and efficiently. The FPD 301 course for faculty development and PMT 257 course for students have collectively demonstrated DAU's curricula development expertise is distinctive to the design, content, and delivery of high-quality and relevant training in the DoD acquisition environment. It is critical to ensure the success of DoD initiatives by providing the acquisition workforce rapid training on emerging defense acquisition policy initiatives using social media and evolving technologies that facilitates the alignment of curricula to career-long learning needs. As highly skilled practitioners, the DAU faculty possess experience and expertise across DoD acquisition disciplines; their comprehensive knowledge of the DoD environment, business practices, and acquisition processes must be transferred through the curricula development process using the technologies, knowledge sharing tools, and media assets. This is done with the goal of enabling the workforce to take this knowledge and best practices to execute their defense acquisition mission and provide the troops they serve with the best equipment and services possible. DAU must position itself to continuously improve its curriculum development infrastructure and mission support processes to optimize the use of resources and to develop responsive solutions to enhance student

learning and performance. By employing processes and systems to enhance the acquisition workforce with decision making skills and operational effectiveness to increase productivity and ensure an efficient and cost-effective infrastructure, DAU will continue to enable the Defense Acquisition Workforce to achieve the right acquisition outcomes for the future.

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