EXPEDITIONARY BLENDED LEARNING: NEW OPPORTUNITIES AND LESSONS FROM THE UNITED KINGDOM

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ABSTRACT

Recent experiences in live course delivery at ERAU's UK campus, combined with dramatic changes in the operational deployment tempo of US military forces assigned at these bases, creates both challenges and opportunities. Exploiting experiences with blended learning at The Open University, traditional learning at the University of Hertfordshire and other UK universities, and teaching concepts in use within the UK's military staff colleges leads to the proposed "Expeditionary" model for blended learning within the ERAU European Region. This model can deliver enhanced student involvement and increased enrollments, provided suitable changes in ERAU's underlying business model can be made. A Strengths / Weaknesses / Opportunities / Threats (SWOT) analysis highlights elements of this proposal, while indicating areas that need further examination.

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Education Goes Expeditionary

Within the last five years, the military operational needs of the Global War on Terror have directly impacted the student base that is the heart and soul of Embry Riddle Aeronautical University's (ERAU) European Region bottom line. The vast majority of our students are active duty US military; most have been subject to both pre-planned and short-notice operational taskings and deployments that have significantly complicated all aspects of their lives, not the least of which has been their confidence in signing up for an eight-week in-residence University course. The impact of this expeditionary style of military operations (as it is known in current Department of Defense doctrine) is felt whether the student in question deploys downrange, or remains at home station but takes on significantly greater military duties and concomitant workloads. Many have resorted to ERAU Worldwide's Distance Learning (DL) facilities to continue their education; in fact, steady increases in DL enrollments partially reflect this. Yet there are splinter groups, small pockets of students, who cannot or do not choose the traditional ERAU EC DL mode during periods of operational uncertainty or increased operational tempo. These students represent a lost opportunity to ERAU, course by course, term by term.

Additionally, the European Region (EU) continues to see frequent and recurring problems with low enrollment levels for some of our live (in-residence) courses at all of our Regional Campuses and Teaching Sites. During 2005 this problem became so severe that the Dean of Academics felt it necessary to have greater visibility into the rationale for operating each small class. A variety of causes are cited on the Small Class forms – military readiness inspections, special mission preparations, deployments, heavy personnel turnover – but all result in a chronic and recurring drain on our potential student base. Cursory analyses (by means of frequent and lively discussions between Center and Regional staff and faculty) of these Small Class forms and their rationales suggests that this drain is not amenable to modeling in any useful way – while we can "know" that we're subject to students disappearing either downrange or back into their on-base ops areas, this knowledge doesn't help us build a term schedule that aggressively meets educational needs while protecting our cost/revenue bottom line from too many canceled classes or too many small classes being operated. This situation is not unique to the European Region,

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and our proposed solutions may no doubt have broader applicability than just within the Areas of Operational Responsibility of US European and Central Commands; that said, we have limited the initial analytical and experience scope of this work to our own, most immediately available experience and data base.

One aspect unique to ERAU Worldwide's European operations is that our overall potential marketplace is for the most part restricted to the US military personnel (plus contractors, civilians, and family members); furthermore, that total marketplace has shrunk substantially as the Department of Defense has reduced the overall number of troops and military units stationed in theatre. The overall ERAU candidate student pool available in Europe has thus reduced, causing both of the afore-mentioned subsets to shrink.

These two student population subsets – the deploying and the in-theatre second echelon – represent the potential missed opportunities that can be more effectively served by ERAU in the EU. Many of the members of both of these cadres, as well as students across our population in general, have frequently stated that while they appreciate our DL course offerings, they much prefer to have live contact in the classroom with both the instructor and other students. They have also expressed strong frustration that sometimes they perceive that they are forced to choose between an ERAU distance learning course, or a live course offered by another in-theatre university. Both aspects present ERAU EU with potentially untapped opportunities.

<center>Opportunity Knocking</center>

This combination of ingredients strongly suggests that the time is ripe for the introduction of new ideas. While many of our students are happily pursuing their educational goals, identifiable subsets have expressed concerns. If those concerns are not the tips of the proverbial icebergs, the small size of these populations suggests that across a single academic year, perhaps 50 to 100 total enrollments across the region are at risk or have been lost due to cancelled courses or non-selected DL offerings. For purposes of illustration, an assumed 4:1 mix of undergraduate to graduate enrollments suggests a potential $83,000 revenue stream either at risk, or waiting to be served.

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At this point it seemed prudent to consult another experience base, one that draws upon different procedural, cultural and marketplace forces that shape and guide its choices in blended learning implementations. The United Kingdom's traditional and non-traditional university systems, as well as its degree-granting military staff college programs, offer insights that can shape and inform the development of a new approach to delivering blended learning -- the expeditionary learning model.

Blended Learning and The Open University

The idea for an 'open university' was first mooted in 1926 by J C Stobart who worked for the BBC and wanted to pursue the idea of a 'wireless university, The Open University (2006a) By the 1960s, the BBC and the Ministry of Education were talking of a 'college of the air' which was then championed by Harold Wilson (prime minister in 1964) and Jennie Lee (minister for arts). In 1967, the Cabinet set up a committee to look at a plan for an open university and by 1970, the first few students were enrolled. The Open University (OU) is now the largest university in the UK and the leading e-learning higher education institution. Figures 1 and 2 show how the population of the university has grown over the years and the percentage of undergraduate and postgraduate students within each age bracket in the year 2004-5,
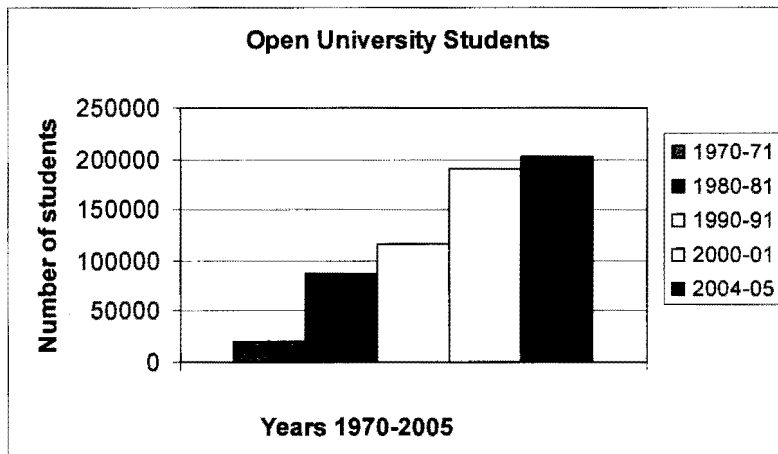

Figure 1. Numbers of OU students 1970-2005.(Open University, 2006a).
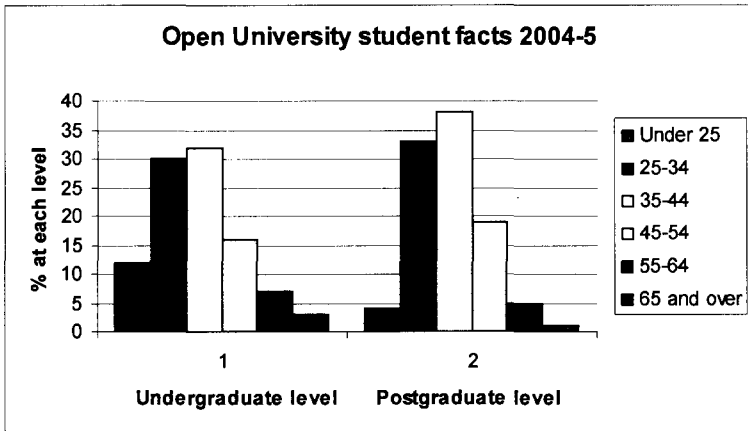
Figure 2. Percentage of students within each age bracket. (Open University, 2006b).

Within the OU there are a number of Faculties. To complete the background picture to

the OU, Figure 3 shows the different subject areas fostered at the university. The data also show

the number of full-time equivalent (FTE) students per subject area in the year 2004-5.
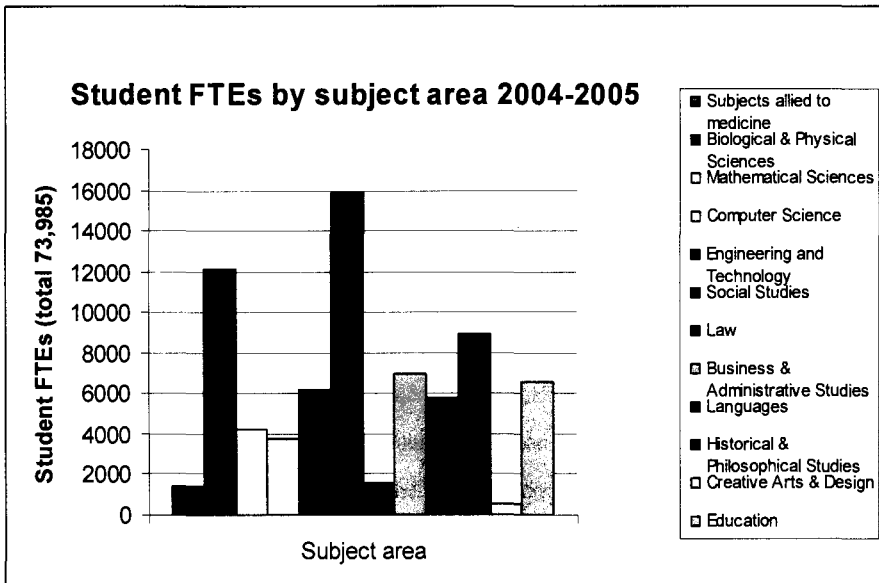

Figure 3. Student FTEs by subject area.

Universities in England date back to the 12th Century, when Cambridge and then Oxford were granted Royal Charters; their students were mainly from the rich and upper-class families. Further expansions happened in Victorian times when the large metropolitan cities built Universities to support the new generations of middle class families (Dearing, 1997). It was not until post war, c. 1945, that any further significant expansion took place. In 1970 it was still only 4% of adults who were educated to degree level; this had jumped to I5% by the start of the 1980s. Figure 4, shows how this has changed and is predicted to change in the very near future (DfES, 2005).
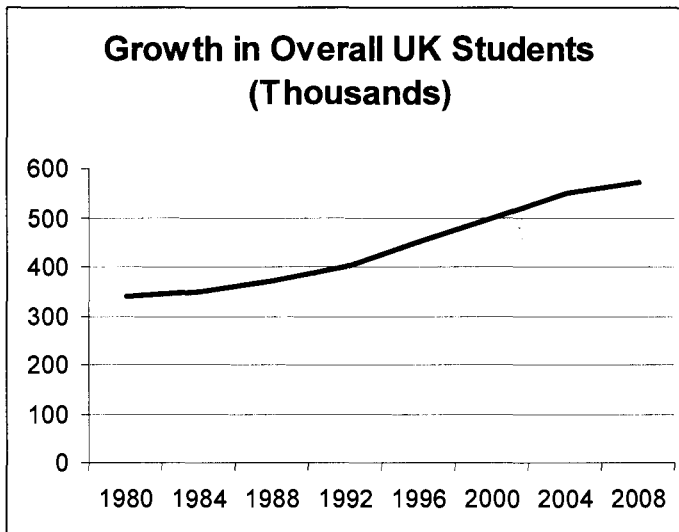

Figure 4. Increases in undergraduate student numbers in England.

Unlike The Open University, the majority of the students are 18 years old when they start their courses, with fewer than 10% being mature (older than 21 at the start of their course). The disciplines studied closely mirror those of The Open University. The significant difference is the age distribution.

Blended learning: First Principles and Results

Blended learning underlines the rich variety of possibilities that exist for learning: from human contact at face-to-face tutorials to high-tech electronic support at a distance and the mixing of asynchronous and synchronous media. At the heart of blended learning lies the support of the student and his or her learning needs: for success, good content and good student support are paramount. However, it is difficult to decide on what 'optimum blends' in terms of teaching and learning might be. Over the years, blended learning has been used to cover a multitude of mixes: e-learning with face-to-face, the use of a mix of different media or different pedagogical approaches and the inclusion of work-based learning. If we further add the requirements of military personnel then this list of needs can become too long to have any chance of being met. Clearly there is a balanced need for a cohort, which will always potentially fall short of the needs
of an individual. However, it can be argued that blended learning is to support the learning process and not make tailored processes for all individuals.

Figure 5 shows the components of blended learning identified in 2004 by respondents to an e-mail survey (Macdonald 2006); in total, 37 educational institutions in 17 countries responded, offering information regarding their blended learning practice:

For the last 30 years, open and distance learning has been the main focus of research into the use of Information Communications Technology (ICT) as an essential component of blended learning. To a certain extent, people believed that if students were provided with access to all the essential learning resources in both work and within the home or community, then effective learning would take place. In addition to the latest in technological developments, students now have access to mentors, tutors and other students via their computers 24 hours a day. However, mere access to ICT does not lead to successful learning of its own accord; the focus needs to be very much on *how* ICT is used – both by students and by those who support students (Conole 2004).
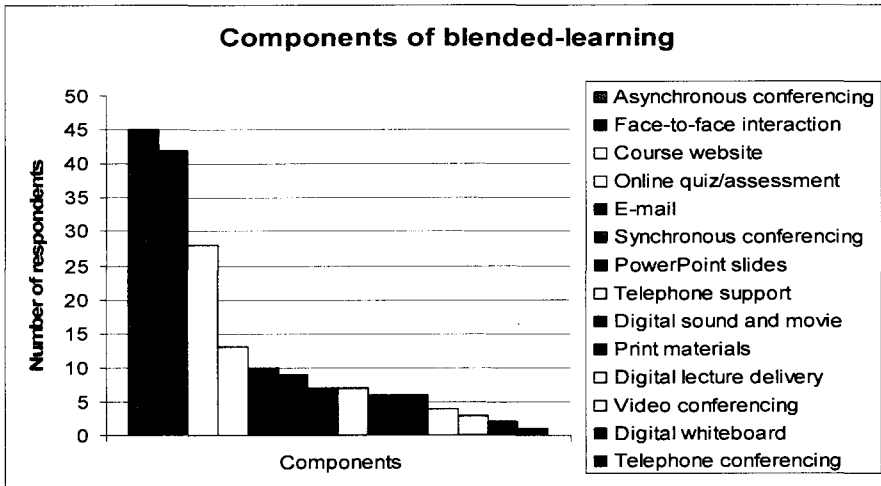
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Figure 5. Components of blended-learning 2004.

At the OU, the use of online media, especially computer conferencing, provides additional or alternative ways of supporting and teaching students. In some OU courses, online conferencing has replaced face-to-face tutoring; in others, online activities form an integral part of the course alongside other media. In addition to this, telephone conferencing is in some cases used to support those students who are unable to attend face-to-face sessions.

A number of courses at the OU have compulsory online delivery; others have an optional online delivery. Table 1 gives the numbers of OU students who studied at least one course with a *compulsory* online delivery in 2004-5:

Table 1

Students Studying at Least One Course with Compulsory Online Delivery

Year 2004-2005 Level	Total number of students at these levels	Students studying at least one compulsory online course
Undergraduate	151,959	30,464 = 20%
Postgraduate	17,524	4,879 = 28%

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The OU has recently reflected on current practice through the work of Macdonald and others in an action research project entitled SOLACE (Supporting Open Learners in A Changing Environment). The researchers looked at existing tutor-mediated support at both the OU and at a campus-based university, the University of Glasgow, Scotland and at how tutors made use of technologies and other means to support students (Macdonald and McAteer 2003). Forty tutors from the OU (across all faculties) were asked to log their practice of support at course start, middle and end and then were asked to use an asynchronous computer conference to share their experiences. The contact logged with students included formal, pre-arranged contact (e.g. tutorials) and informal contact made outside the scheduled sessions. The tutors' responses revealed a rich, blended strategy that used a variety of media for student support for both individual students and groups, including synchronous contact (e.g. face-to-face tutorials, video conferencing, real-time audio graphics and collaborative peer-group support) and asynchronous contact (e.g. email, computer conferencing and the written medium). The research revealed flexibility and an acknowledgement that not all tutors were using the same teaching and support strategies to reach the same goals. In addition, the study highlighted several aspects of support that underlined quality in intervention; these aspects were deemed to be:

- *affective* – confidence building
- *dialogic* – tailoring to individual needs
- *focusing* – bringing study to the fore
- *reflective* – allowing time to think
- *timely* – arriving when relevant and useful
- *reversionable* – using support to individual as well as group
- *accessible* – available to maximum number of students

(Macdonald 2006, p. 24)

In contrast to The Open University, traditional universities have been slow to respond to blended learning. This has in part been through the lack of need as students were in lectures and could contact their lecturers on a daily basis face-to-face. The conventional approach of lectures, tutorial, seminars and laboratory work focused towards note taking and small group discussions

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and work. As class sizes increased and this became more difficult alternative strategies were needed. This paralleled the development of computers and many were fixed with the idea of blended learning being access to lecturers' PowerPoint slides. Fortunately, through media exposure, for example The Times e-Tutor of the year award, this mis-conception is no longer accepted. All universities have intranet facilities similar to Blackboard, and student supported blended learning is now mainstream to all English universities' education. Indeed, some universities make use of their intranet support systems as marketing material to attract new students; which is a sign that blended learning is also being considered as a primary need of students.

Dangers

Through blended learning, most higher education institutions would seek to present a mix of the most suitable methods and technologies for a) student support, b) teaching and learning and c) assessment. Each institution has its strengths: for the OU, some may say that these lie largely in the high quality of its materials (a large percentage of other UK universities make use of these), or perhaps in the media and technology at its disposal (including the use of the VLE) or the high calibre of the teaching staff at the university – national tables for teaching quality placed the OU in the top five ranking UK universities in 2003 and 2004; in 2005, in the first National Student Survey, the OU was ranked top for student satisfaction.

Nevertheless, all institutions need to be aware of the potential problems associated with blended learning. These would include general factors such as:

- lack of access to essential new technology
- lack of provision of appropriate training for staff
- use of inappropriate assessment measures for courses using a blended approach

In addition, many tutors are unwilling to change their teaching habits – it is much easier to stick with what is known and comfortable. However, blended learning will not work if "a bit of classroom" is simply thrown together with "a bit of online".

In our desire to provide exciting new interactive learning experiences for our students, alongside a wealth of intranet sites, it is easy at times to forget about the impact these might have

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on the students' ability to manage study effectively. One area focused on by Thorpe (2006) at the OU is the issue of *time* and how students manage their learning, given a wide range of pressures including an increasingly more 'blended', and often therefore more time-consuming, approach to teaching and learning.

Thorpe (2006) reports that for 43% of all students who drop out of their course at the OU, the main reason given is 'I fell behind with my course work' (Ashby 2004, p. 71). Perhaps not surprisingly, even those who pass their course have a similar story to tell: in 2005, over 30,000 students were surveyed on their views re the quality of their courses. Fifty-seven percent of these students admitted to falling behind with their studies. Many factors seem to play a possible role in this: researchers such as Hilt and Turoff (1985) identified information overload as a factor and Salmon (2000) looked at the time it takes students to learn new skills, e.g. how to use new forms of communication such as online conferencing. Further data from the OU Courses Survey in 2005 revealed that only 39% of all students felt that the workload for their chosen course was as they expected it to be and that 48% of OU students who did not drop out of their courses felt the workload to be more than expected. Thorpe and Godwin (2006) also report that time pressures on students are even more acute where conferencing is seen to be effective and integrated fully into a course: i.e. in such an environment, more online interaction and participation is expected and often included as part of the assessment.

Team Teaching at the Joint Services Command and Staff College

In contrast with the American military experience, the UK has not traditionally required nor provided means for its military officers to earn a university degree (even an undergraduate one) to obtain a commission. Staff colleges were developed which focused both on the theory and practice of military art and science, with coursework in related subjects. It was not until well into an individual officer's career – typically 12 years of active duty or more – that an officer would be sent to a Service-specific Staff College, receive this additional education, and in limited cases be offered the opportunity to complete additional studies and earn a Master's degree. Major reviews conducted from 1994 onward came to two major conclusions which have shaped the teaching practice for the Staff Colleges; both were driven by the realities of late 20th Century

British military experiences, and the perceived needs of the British economy and society as a whole. The Strategic Defence Review (Ministry of Defence, 1998, pgs. 192-199) defined the mission of UK Defence forces in "joint" or multi-Service terms, which then drove a need for increased joint military education and training. This meant that Service-specific education, and hence the individual Colleges themselves, had to be replaced by a single Joint Service curriculum and College. It also concluded that it was in the UK's interest overall to enhance the officer corps' skills and credentials for when they would ultimately transition back into civilian life (Ministry of Defence, 1998, pgs 204-227, and 2001, pgs 10-16). Significant budget commitment and realignment was made to close Service-specific schools, reassign personnel, develop new courseware and programs; just as important, Service and Ministry of Defence personnel policies were implemented to encourage, recognize and better utilize those officers who had sought out University credentials. The Defence Training Review (Ministry of Defence, 2001, pgs 37-40) put further emphasis on these policies.

The UK's Joint Services Command and Staff Course was the first of these joint programs, with its first class held in the 1997-1998 academic year. It embodied a team teaching technique that had been successfully employed at the Service staff colleges: a serving military officer teamed in the classroom with an academic teaching partner to deliver most theoretical subjects, conduct group discussions, and in many cases plan, conduct and critique exercises and war games. The focused military experience of the one, combined with the (usually PhD-holding) academic insight and knowledge of the other, made for success. The military Directing Staff (DS) would quite often not have the background knowledge of the history of a conflict, understand the mechanics of a United Nations Security Council debate, or the framework of international law that led to a specific mission's Rules of Engagement; these would be covered by the academic from the Defence Studies Department (DSD). The DS would evaluate the student's progress against the military professionalization goals and desired learning outcomes of the course, with the DSD evaluating formally-set essays, research papers, and academic exercises.

The best illustration of this can be seen in the manner in which readings and classroom discussion lesson plans and materials were developed and used. Typically, most military DS

were not acquainted, let alone be possessed of subject matter expertise, in the subject at hand. The DSD developed the reading list, and a set of "discussion leads", to inform and exercise student appreciation of the topic in accordance with the established curriculum. The DSD would then develop a set of guidance material for the DS to read and reflect upon, and to use while guiding classroom discussion or examination of the lesson material. These "pinks" (for the color paper they would be printed on) bridged the gap between the military field experience of the DS and the in-subject concentrated knowledge of the DSD. The system did have an inherent flaw, in that students could easily perceive that the DS was only "one pink deeper" than they were in their mastery of the subject. What balanced this was a ready willingness on the students' part to correctly see the DS' role as *moderator, not expert,* in guiding their mutual exploration of the subject at hand.

In many respects, this has strong parallels to the common experience in American universities of using *teaching assistants*, whether part-time or full-time. Teaching assistants guide classroom discussions, evaluate student homework results, conduct tutorial sessions on selected topics, and offer an extra handrail for the shaky student to grab hold of when a bit of extra guidance is needed. They can offer their charges varying levels of insight on the coursework at hand – less than the faculty member, in most cases, but typically more than just a randomly-selected fellow student might provide.

Blended as Expeditionary Learning: The Model

In current Embry-Riddle parlance, blended learning also creates the opportunity to replace in-classroom contact hours with course content delivered by other means. Studies sponsored or encouraged by the Worldwide Campus Faculty Senate have examined various aspects of this part of the BL concept, and have resulted in some changes to our policies and procedures. As of this writing, however, Blended Learning in this regard is not conducted within the European Region. Our approach, instead, is somewhat binary in application: a student either takes a selected course as "strictly distance learning", or takes it in a live classroom setting. The live classes may be augmented to a greater or lesser degree by the use of Blackboard-hosted content, or not; regardless, the contact time requirements remain fixed.

The combination of the UK university experiences and the expeditionary military operations tempo that our student base must deal with suggests that a different approach might work. This expeditionary learning model implements a *team teaching* approach combined with distance learning techniques, whose key features are:

- One course instructor, and multiple teaching assistants (TAs), one per site or learning location. Instructor develops entire course, including support packages for the teaching assistants; monitors its progress; and is ultimately responsible for student outcomes.

- Teaching assistants not presumed to be qualified / qualifiable as instructors in the particular subject; they may be other ERAU faculty members, or ERAU graduate students, resident at the site in question.

- Combined live and distance learning components

- Live components can be located at multiple teaching locations, running asynchronously

- Live sessions primarily facilitated by teaching assistants (instructor facilitates at her home location)

- Contact time reduced by a sizable fraction (up to 50% or more)

Key aspects of the Expeditionary Learning model are shown in Table 2 using a Strengths / Weaknesses / Opportunities /Threats (SWOT) format to assist in evaluating the model and informing implementation decisions.

The strengths of this concept directly trace to the ways in which we would quantitatively and qualitatively assess its initial and ongoing success, while its weaknesses are highlighted by key implementation needs that would require new budget, changes to existing procedures, and critical training needs. Failures on any of these prerequisites would significantly decrease Expeditionary Learning's chances of success as a new program offering. Once it has been successfully launched within a pilot set of campuses and courses, a number of natural opportunities for growth appear, culminating in its implementation Worldwide. Threats to this concept are largely perceptual – perceptions held by other contract providers, our Government

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Table 2

Expeditionary Learning SWOT Analysis

STRENGTHS	WEAKNESSES
+ Fully exploits Faculty capabilities	+ Requires new Teaching Assistant
+ TAs: familiar part of graduate programs	procedures & training
+ Strengthens Graduate students	+ Needs Financial Development to set and
+ In-subject mastery (graduate work)	achieve Hurdle Rate
+ Refreshes earlier (u/g) coursework	+ Teaching Assistants: pay or reimburse?
+ Leadership and Teaching skills	+ Instructors: current pay, more, less?
+ Enhances class scheduling flexibility	+ Budgeting & Accounting procedures
+ Students not "forced" to go DL	+ Requires enhanced Faculty training
+ Students not "forced" to other schools	and development
+ Meets / exceeds student expectations	+ Changes student registration procedures
+ Uses existing BLACKBOARD system	+ Requires new marketing approach
+ Straightforward growth from existing	and materials
Methodologies	+ Training, marketing costs not in budget

+ Negative marketplace perceptions:	+ Increased enrollments
+ Not in letter or spirit of current contract	+ Enhanced quality of instruction
+ Allegations of unfair competition	+ Enhanced perceived value of ERAU
+ Inappropriate / Unproven format	educational experience
+ Students misperceive concept:	+ Enhanced retention of current students
+ More difficult (avoid course)	+ Within existing programs
+ Easier / shorter course (poor grades)	+ Into follow-on / additional programs
+ Poor uptake by students & teachers	+ Possible Growth Paths:
+ Poor student academic performance	+ CONUS DL Instructors, in-field TA's
+ Accreditation and MIVER[a] challenges	+ Downrange teaching sites
+ TA availability / interest	+ Better support for in-residence students
+ Continuous recruiting of grad students	on TDY[b]
+ Achieving academic integrity & quality	+ Expansion to all Worldwide campuses
THREATS	OPPORTUNITIES

[a]Military Installation Voluntary Educational Review

[b]Temporary Duty (3-179 days away from home duty station & campus)

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contract officers, our faculty and staff, our graduate students, and our students – our ultimate customers.

Success of the Expeditionary Learning model, when implemented, would be measurable in several ways. Small classes would no longer need to be canceled, nor are potentially low-demand courses kept off the in-residence schedule because of anticipated poor enrollment numbers. By providing an alternative to meet the demands of small handfuls of students at geographically disperse sites, the number of classes held (and total number of enrollments) increases. Since students are no longer faced with such a binary choice of course format, they may opt in larger numbers to take (what are perceived to be) difficult courses sooner, given an Expeditionary offer of structured local tutorial support and live delivery, rather than take the course in a traditional DL format – or take the course from another provider altogether, as some students do because of individual schedule constraints. Comparisons of student performance in DL, live, and Expeditionary format classes would provide useful indicators of any incipient quality control problems, such as grade inflation.

Other indirect benefits can accrue from implementing this approach, benefits which ultimately enhance and reinforce the marketplace's perception of ERAU both as provider of education and as employer of faculty. Faculty members in theatre, either adjunct or contract, will have greater opportunity for positive student contact. Our graduate students who choose to become teaching assistants will also experience enrichment and reinforcement of their understanding of their previous undergraduate coursework. As they coach their undergraduates through discussions and exercises, they will also find opportunities to polish their communication and leadership skills. All of this will strengthen their own work in their graduate studies, while developing a stronger sense of teamwork and belonging within the ERAU student family.

There are clearly some challenges to developing and implementing such a procedure within the European Region. First and most important, the design of such Expeditionary courses must address the key litmus tests of external accreditation reviews. The role of the teaching assistant, and how their efforts are guided and evaluated so as to stay on the educational flight plan, is the new piece of work for us in this model. It is not insurmountable, and several possible

approaches to select, guide and develop and maintain a local cadre of graduate teaching assistants are available.

Stereotypes about what is and is not Distance Learning or multi-media delivery will have to be taken into account; some of these stereotypes are embedded either in ERAU's contract with the Government, or perceived to be by both Government and all of the universities that are parties to that contract. Student perceptions must also be taken into account. A commonly expressed expectation by our students is that blended learning equals reduced contact time, implying a reduced student workload, in a shorter space on the calendar, when compared to traditional live courses. Even when a properly designed Blended Expeditionary course is able to achieve this, this should not be our design goal. We must take steps in product design, positioning, and promotion to make sure that these courses are not misperceived by our marketplace.

To balance costs and benefits, the model must be further developed to set the decision thresholds for minimum per-site enrollments, minimum total course enrollments, teaching assistant remuneration (either as tuition or textbook credits, or as pay), and instructor pay, all taken against assumptions about enrollments, tuition rates and earnings. It is premature for this paper to attempt to set this internal hurdle rate in any analytical way, but a hypothetical case illustrates this dynamic. Under the present policies, an undergraduate course offering that is only able to draw four to five students at a given EU location is seriously at risk of being canceled, if it is put on the schedule in the first place. The total revenues vs. the total costs simply don't balance. However, if Expeditionary Learning can allow one course section to draw four students apiece from four different sites during the same term, the $17,136 revenue stream from these 16 tuition payments should be able to cover both the traditional fixed costs (such as instructor pay), the new costs of teaching assistants (directly charged to the course, whether the assistant is paid cash or with tuition credits), perhaps even instructor travel to one or more of the sites – all while still making a healthy input to the Campus' Contribution Margin for that fiscal year.

On first examination, it seems that the existing set of tools and techniques embodied in our approach to Distance Learning courseware is sufficient to meet the needs of Expeditionary

Learning. The only changes might be in placing greater emphasis on electronic facilitation tools, both for instructor-assistant teamwork and across the course as a whole. As the concept is further refined, this investment question may need to be reexamined.

<center>Threats as Potential Barriers to Immediate Implementation</center>

The most challenging barrier to implementing such a concept is perceptual – how this construct is perceived throughout our marketplace will make or break its chances for success. Does it fit within the spirit or letter of our Tri-Services Contract, or does it violate it? Does it sufficiently change the "rules of the game" that challenges of unfair competition will block any such attempts? Is the concept of teaching assistants "expeditionary style" too challenging to traditional processes and mindsets regarding courseware development and execution? Each of these perceptual barriers embodies real and legitimate questions that must be addressed; others no doubt exist as well.

<center>Conclusion</center>

Blended learning can help in the areas of motivation and retention, with face-to-face sessions supporting closer collaboration online and vice-versa. It should also encourage course designers and tutors to consider which approaches, methods and media would best suit each learning activity. A successful example of blended learning in a course would contain different types of material, each delivered by way of the medium best suited to it.

These concepts have been applied to address a current and chronic problem in Embry-Riddle's delivery of education to US military personnel stationed in the European Region, and have resulted in the formulation of the Expeditionary Learning model. This model combines traditional components of Blended Learning and re-introduces the active role of the teaching assistant to provide effective teaching in circumstances that should enhance student learning and improve overall enrollment numbers.

Future research in this area needs to look more closely at the impact of blended learning on students, and how it can further enhance the Expeditionary concept. It should seek to gather evidence on such things as the student experience with using online courses, conferencing, the Internet use, VLE, formative assessment software, weblogs, wikis, and other databases. Given

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that many students are involved in work-based learning, future research could also look at issues such as time-efficiency in relation to work-based learning and also the use and effects of mobile technologies.

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