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Blended Web Learning: Advantages, Disadvantages, Issues, and Considerations

Curtis J. Bonk, Ph.D.
Associate Professor and President
Indiana University and CourseShare.com

Tatana Olson
Doctoral Student, Industrial/Organizational Psychology
Purdue University

Dr. Robert A. Wisher
Senior Research Psychologist at Army Research Institute
U.S. Army Research Institute

Kara Orvis
Doctoral Candidate, Industrial/Organizational Psychology
George Mason University

Introduction

The importance of a highly trained and skilled military has never been greater than today. Rising to meet this need is the capability to train personnel anywhere in the world at any time using distributed learning (TRADOC, 1999). In response, the purpose of this study is to understand how a blended or hybrid approach to e-learning impacted the professional development of students in a high-level military course. This study addresses e-learning from the perspectives of the course learners, the course advisor, and the instructors. Focus group discussions helped document distinct advantages and disadvantages from different components of the course. Issues and considerations for e-learning mentioned consistently across groups should help with future course design and delivery methods. In effect, this research might help in forming instructional design principles for the Web as well as the fine-tuning of this particular program and ones similar to it.

Methodology

At the U.S. Army Armor School in Fort Knox, Kentucky, the use of collaborative learning environments is taking center stage in the Armor Captains Career Course (AC3-DL) (Wardell & Paschetto, 2000). The purpose of the AC3-DL is to train captains to command companies and perform as assistant operations officers at command units such as a battalion. This training is conducted in three phases; the first two are online (Phase Ia: asynchronous, and then Phase Ib: synchronous), while the final phase is face-to-face.

Procedure

Interviews took place with two focus groups of four students who were completing the AC3-DL course as well as three instructors and the Distance Learning (DL) Education Advisor. Prior to the focus group meeting, the students completed a series of questionnaires related to their Internet backgrounds, attitudes toward working in groups, satisfaction and self-efficacy for the synchronous phase of the course, perceptions of the effectiveness of the online environment, and perceptions of task and interpersonal cohesiveness.

Results

Across the students, instructors, and course supervisor focus group sessions, there were a number of distinct

advantages and disadvantages noted. Naturally, the students liked the flexibility of completing assignments on at their leisure, the immediate feedback, and the thoughtful commenting and reflection of this environment. However, they mentioned problems with the length of most course modules, technology downtime or incompatibility, and system inflexibility. The instructors found that they liked the ability to tailor strategies to individual student needs, provide immediate feedback and online mentoring, standardize the content, embed small group interaction, update content, and foster knowledge application. However, they complained about the high attrition, excessive time commitments for their students, and lack of instructor control over module size. The course designer noted that the online course can take track student learning, provide more authentic learning experiences, take advantage of advances in learning theory, and address individual student needs. However, she admitted that there were definite problems in these learning environments, such as the risks in committing to particular technologies or delivery mechanisms before the students begin to learn.

Ten key Web-based instruction considerations or issues mentioned across participants are listed in Table 1. These considerations or issues relate to feedback, content meaningfulness, content size, course development and organization, the role of the online instructor, structuring small groups, flexible and active learning, technology utilization, assessment practices, and general skills such as online communication, problem solving, and teamwork.

Table 1. Web-based Instruction Considerations and Issues

Web-based instruction consideration or issue	Student Advice	Instructor Advice	DL Education Advisor Advice
1. Feedback.	E-mail is important mechanism for contacting instructors.	Provide instant and consistent feedback with e-mail and other tools.	Involve direct e-mail feedback.
2. Meaningful and Real-World Content	The construction of online products should approximate real-world application.	Require students to produce products that instructors and peers can evaluate.	Include meaningful content and allow students to apply new skills to real-life exercises.
3. Size and Scope of Content Materials	To maintain motivation and increase completion rates, divide asynchronous content and testing into smaller units or accomplishments.	To increase student completion rates, instructors need some control to change the size of content modules.	Utilize minimal extraneous content, graphics, or practice exercises.
4. Course Development and Organization	A pre-orientation session will help address questions and concerns about the online course. Students need lecture and direct instruction before project work.	Learn basic content in asynchronous phase (“crawl”), put knowledge to use electronically and on paper in synchronous phase (“walk”), and apply knowledge in real-life scenarios in residential phase (“run”).	Carefully analyze target audience wants and needs prior to course development.
5. Role of Instructor	Instructor is helpful as a facilitator of learning.	Instructor role is more of a facilitator of the	Instructor provides feedback and sense that

	The same instructor should support students across all phases of online training.	learning process; providing tools, means, and guidance to learn effectively. Indirect questioning, prompting, reminders, role playing, and direct requests are ways to engage and involve students.	someone cares about their learning.
6. Small Group Structuring	In online role-play, rotate roles among group members.	Match stronger leaders and weaker students in role-play activities to boost performance and confidence. Provide instructions and information prior to online events such as role plays and product discussions.	Create active environment with role-plays and simulations, but must provide balance between flexibility and learner accountability.
7. Flexible and Active Learning	Be flexible and allow students to complete online modules at their own pace; minimize need for instructor to certify students are ready for next step or phase.	Distance learning helps Army Reserve students fit training into busy schedules and keep up with active duty personnel.	Offer flexibility, choice, variety, meaningful contexts for learning, and student performance opportunities.
8. Technology Utilization	To minimize frustration and downtime, utilize basic functions or technologies, where possible.	Use asynchronous communications for learning basic concepts and synchronous communications for application.	Limit technological visions and begin to incorporate technology based on what it can presently accomplish.
9. Build General Skills Through Online Communication, Problem-Solving, Teamwork, and Identity	Small talk, introductions, and information sharing helps form team identity.	Communication skills, problem solving, and teamwork are general skill outcomes of interactive distance learning. Online tasks should involve teaching students how to work with each other on a team to solve a problem. Teamwork and virtual talk among small groups fosters interaction and participation.	Courseware structured to move from individual effort (asynchronous component) to application exercises in small group collaboration activities (synchronous component) to problem solving in collective efforts within units (resident component) is a useful framework for fostering student learning.
10. Assessment Practices	Online assessments should closely match real-world expectations. Focus might shift from	Asynchronous learning is more ideally suited for objective tests and measurements, while	Online assessments can include automated pre-tests, post-tests, and practice exercises that

	<p>quantity of learning or breadth across areas to quality or depth of learning in particular areas. Assessments should also cover smaller amounts of instruction or learning.</p>	<p>synchronous might be used for student performances or products and criterion referenced evaluations.</p>	<p>provide immediate student feedback. Random feedback or assessment tools are also beneficial. While evaluation gates require application of learning, the learning management system needs to be more flexible and adaptable in regards to items missed on gate examinations.</p>
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While this focus group study provided some general information about the keys to success and failure on the Web, the coding of over 6,500 chat acts indicated that there were shifting patterns of interaction during the synchronous phase of the training. For example, while technology concerns gradually diminished, on task discussion peaked in the middle months and social interactions were higher at the start and end of the training. Overall, student chats were categorized as on-task 55%, social 30%, or technology-related 15%.

Final Comments

There are many avenues for course and tool development as well as student testing and evaluation within military e-learning as well as in higher education, K-12, and corporate settings. The present study provided one look at the advantages and disadvantages as well as many instructional considerations and issues within a unique online learning program. Other studies might explore completion rates, attitudes, and overall learning when one's career is not contingent on course completion. The years ahead will require a myriad of contributors, many focus group discussions, thoughtful critique of what works and what tends not to work, extensive teaching and research experimentation, instructional fortitude, and careful project planning and funding.

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Biographical Sketches

Dr. Curtis J. Bonk is received his master's and Ph.D. degrees in educational psychology from the University of Wisconsin. He is an associate professor of Educational Psychology as well as Instructional Systems Technology at Indiana University. He is also a core member of the Center for Research on Learning and Technology at IU where he co-directs the TICKIT program. Curt is a Senior Consortium Research Fellow with the Army Research Institute. He received the Gorman teaching award in 1999, the Hites Mentoring Award in 2000, and the "Cyberstar" award from the Indiana Information Technology Association in 2002. Dr. Bonk travels the globe teaching instructors and trainers how to teach on the Web and is in demand as a conference keynote speaker. He is President of CourseShare.com which he founded

in 1999.

Address: Indiana University
School of Education: Room 4022
Dept. of Counseling and Educational Psychology
Bloomington, IN 47405-1006
E-mail: CJBonk@indiana.edu or cjbonk @courseshare.com
URL: <http://php.indiana.edu/~cjbonk> and <http://CourseShare.com>
Phone: (812) 856-8353
Fax: (812) 856-8333

Tatana Olson is a doctoral student in Industrial/Organizational Psychology at Purdue University. She is currently employed as a Senior Research Fellow at the U.S. Army Research Institute. Her research interests include e-learning, social interaction within online groups, team self-efficacy, and computer supported collaborative learning. Her recent research addresses communication patterns and problem solving behaviors during synchronous training of officers in the military as well as focus group research on hybrid e-learning.

Address: Dept of Psychology
Purdue University
1364 Psychological Sciences Building
West Lafayette, IN 47907-1364
E-mail: tmo4@hotmail.com

Dr. Robert A. Wisher is a Senior Research Psychologist with the U.S. Army Research Institute. He also serves as the Acting Director of the Advanced Distributed Learning initiative. He holds a Ph.D. in Cognitive Psychology from the University of California, San Diego. He has published more than 80 technical reports, book chapters, and journal articles related to training and training technologies. He serves on the Editorial Advisory Board for the American Journal of Distance Education. In 1999 he received the Most Outstanding Achievement Award by an Individual from the United States Distance Learning Association for his research and evaluation in distributed learning environments. In 2000-2001, Dr. Wisher was a Visiting Scholar at the Center for Research on Learning and Technology at Indiana University.

Address: U.S. Army Research Institute
5001 Eisenhower Avenue
Alexandria, VA 22333-5600
E-mail: wisher@ARI.army.mil
Phone: (703) 617-5540

Kara Orvis is a Doctoral Candidate in the Industrial/Organizational Psychology program at George Mason University and currently employed as a Senior Research Fellow at the U.S. Army Research Institute in Alexandria, VA. She received her M.A. in Industrial/Organizational Psychology from George Mason University in 1999, and her B.A. degree with honors from Ohio Wesleyan University. Her main research interests have been in the realms of teams, multi-team systems, and leadership, concentrating on team training and development. Her current research focuses on teamwork and leadership issues regarding dispersed teams and computer supported collaborative learning..

Address: U.S. Army Research Institute
5001 Eisenhower Avenue

E-mail: Alexandria, VA 22333-5600
OrvisK@ARI.army.mil