

STUDY OF STUDENT PERCEIVED EFFECTIVENESS OF
THE DELIVERY OF DISTANCE EDUCATION INSTRUCTION AT
THE UNITED STATES ARMY COMMAND AND GENERAL STAFF COLLEGE

by

DAWN M. WESTON

B.A., Benedictine College, 1997
M.E.A., Benedictine College, 2000

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF EDUCATION

Department of Educational Leadership
College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2010

Abstract

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The main research question was: What are student preferences for the delivery of the USACGSC distance education curriculum? To answer this research question, sub-questions needed to be answered. These sub-questions were: (1) What are student preferences for course material delivery? (2) What are student preferences for instructional methods? (3) What are student preferences for collaboration with other students? And (4) What are student preferences for research?

The survey data were used to answer the research question and the sub-questions. The data were analyzed using the USACGSC Quality Assurance Office (QAO) standard approved by the USACGSC Deputy Commandant.

Based on this study, the researcher recommended making a portion of the USACGSC advanced distributed learning courses face-to-face; making all course material downloadable or issuing course material in print and CD; making coursework self-paced; and making faculty available to all online students.

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Approved by:

Major Professor
Dr. Teresa N. Miller

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Dedication

This dissertation is dedicated to the men and women of the United States Army. It is my honor and privilege to serve with these selfless individuals.

CHAPTER 1 - Introduction to the Study

Introduction

Since the year 1909, distance learning has been one of the United States Army Command and General Staff College (USACGSC) curriculum delivery modes (Command and General Staff College, 1909). In the last decade, the USACGSC distance education program has exploded in both the number of students enrolled and the number of courses available. Based on the large number of students enrolled in distance education programs at the USACGSC, this research was intended to add to the present research base regarding the students of the USACGSC preferences for distance education. According to constructivist educational theory, an emphasis on student-driven education positively affects student learning (Diaz, 2000). Accordingly, accommodating student preferences, as identified through this study, should result in enhanced student learning.

This chapter contains the following discussions:

1. Introduction
2. Overview of the Issues
3. Purpose of the Study
4. Statement of the Problem and Research Questions
5. Significance of the Study
6. Organization of the Study
7. Researcher Involvement
8. Definitions of Terms and Acronyms
9. Summary

Overview of the Issues

Correspondence courses have been a staple of distance education programs since the nineteenth century (Bates & Poole, 2003). The advent of the Internet ushered in a curriculum delivery method that provided flexible learning for students in regards to the freedom of location and time. The Internet became a mode of delivering education to students whether the students were attending school in a physical or virtual classroom. Thomas Friedman, in *The World is Flat* (2007), discussed education in terms of globalization and technology in the 21st century. Friedman emphasized the need for education to be available in any venue and at any time through any method that works. Friedman's philosophy reinforced the importance of the message of this study: higher education programs need to provide curriculum in ways available to students anywhere and at any time. Higher education programs need to go beyond the physical structure of a campus to reach students worldwide. The Army especially needs to develop Internet-based programs responsive to soldiers in increasingly remote places as far-flung as Iraq, Afghanistan, and Ethiopia.

Purpose of the Study

The purpose of this study was to identify student preferences in order to improve distance education curriculum delivery of the distance education program of the USACGSC. This study offered analysis and results from the students' viewpoints of distance education at the USACGSC.

According to Clark and Mayer (2003), student preferred learning characteristics taken into account when developing distance education courseware provided a better

learning experience for students. The resident courses at the USACGSC, using post-instructional conferences (PIC), curriculum delivery reviews (CDR), and surveys of resident students are tailored to meet the needs of the Army and its students. The resident students of the USACGSC, through surveys conducted by the USACGSC Quality Assurance Office (QAO), provide information about their preferences for delivery of the course curricula. However, similar surveys are not conducted for the USACGSC distance-learning students. This study surveyed distance-education students of the Advanced Operations and Warfighting Course (AOWC) to determine their preferences for course delivery using a survey instrument designed based on Dillman's (2007) recommendations for survey research. This research provided the USACGSC curriculum developers with information to improve design of the distance education courses to meet the preferences of students and to improve student learning. By allowing students to provide input to the process, there is a maximization of student motivation thus allowing for improved student learning (Diaz, 2000).

In this age of rapidly changing contemporary operating environments facing the United States Army, soldiers need up-to-date curriculum in a timely and flexible package with access from remote locations worldwide. Improving distance education is important as evidenced by the high enrollment (51 percent of students) in the USACGSC distance education programs. In addition, there are components of distance education built into the USACGSC Reserve School program.

The Profession of Arms requires a flexible military educational system capable of educating military professionals wherever assigned, at any career development level, and for any Army career field. The flexibility and portability of distance education allows

military personnel the opportunity to continue their career advancing education, whether stationed within the continental United States or at one of the many worldwide locations of the United States Army.

Like civilian non-resident post-graduate programs, the delivery of non-resident courses at the USACGSC has evolved from delivery via correspondence courses, often referred to at the USACGSC as “Box of Books,” to delivery via the Internet. The USACGSC must take student preferences for delivery of material into account to improve student learning. In the past, the USACGSC has provided little to no student involvement in distance education student learning (Diaz, 2000). The program was a student interacting with the computer.

Statement of the Problem and Research Questions

Students of the USACGSC distance education program are located throughout the world yearly enrollment of close to 5,000 students. Since not all students are able to attend a resident school, it is the intent of the USACGSC to provide non-resident students a program of instruction as closely equivalent to the resident program as possible (TRADOC, 1999). Because of this effort, the non-resident program evolved through the years from the mailing list of 1909, to a box of books in the 20th century, to online courses in the 21st century. Even though the USACGSC QAO conducts surveys of resident students for every block of instruction of the resident course in an effort to improve student learning, the USACGSC QAO has not conducted comprehensive surveys of distance-learning student preferences.

In light of the need for a comprehensive survey of the USACGSC distance education students, the main research question was: What are student preferences for the delivery of the USACGSC distance education curriculum? To answer this research question, sub-questions needed to be answered. These sub-questions were:

1. What are student preferences for course material delivery?
2. What are student preferences for instructional methods?
3. What are student preferences for collaboration with other students?
4. What are student preferences for research?

The analysis and results of the data from the research were used to answer the research question and the sub-questions. The data were analyzed using the USACGSC QAO standard. The standard of 66 percent responses is a filter to determine whether the responses met the criteria for change. This standard for change was approved in 1985 by the USACGSC Deputy Commandant, who set the standard for the USACGSC research (Bitters, 2000).

Significance of the Study

The results of this study were made available to the USACGSC Commandant. Also made available were recommendations for improving distance education curriculum based on the findings. The USACGSC Commandant is responsible for all decisions on curriculum and delivery. The USACGSC curriculum developers and online course administrators can use the findings and recommendations to improve student learning in a delivery mode providing effective anytime, anywhere, and flexible courses for students located worldwide. Professional military education requires the Army to provide a variety

of Professional Military Education (PME) programs. The Advanced Operations and Warfighting Course (AOWC) by distance learning was the only delivery method available for students other than those in residence at Fort Leavenworth. This increased the number of the USACGSC students receiving distance-learning courses.

Army officers enrolled in distance education programs are either active duty soldiers or reserve component soldiers. Since the Intermediate Level Education-Common Core (ILE-CC) is required for promotion to lieutenant colonel, those not chosen for the resident course at Fort Leavenworth take the course via resident satellite schools located in other areas of the United States, via schools conducted by Army Reserve units worldwide, or via the online education program.

To understand better the significance of this research, the reader should be aware that the USACGSC uses elements of online learning throughout its programs of study. The USACGSC programs of study are administered by four schools: the Command and General Staff School (CGSS), School for Command Preparation (SCP), School of Advanced Military Science (SAMS), and the Army Management Staff College (AMSC) (see Figure 1). CGSS educates mid-level officers, international officers, other military service officers, and inter-agency officers, usually in the rank of major or equivalent. SCP educates both senior enlisted and senior officers for command positions. SAMS provides officers, after completing Intermediate Level Education (ILE) or after selection from the field, the opportunity to obtain a masters degree in Military Art and Science through an additional year of education at Fort Leavenworth. AMSC educates Army personnel, both military and civilian.

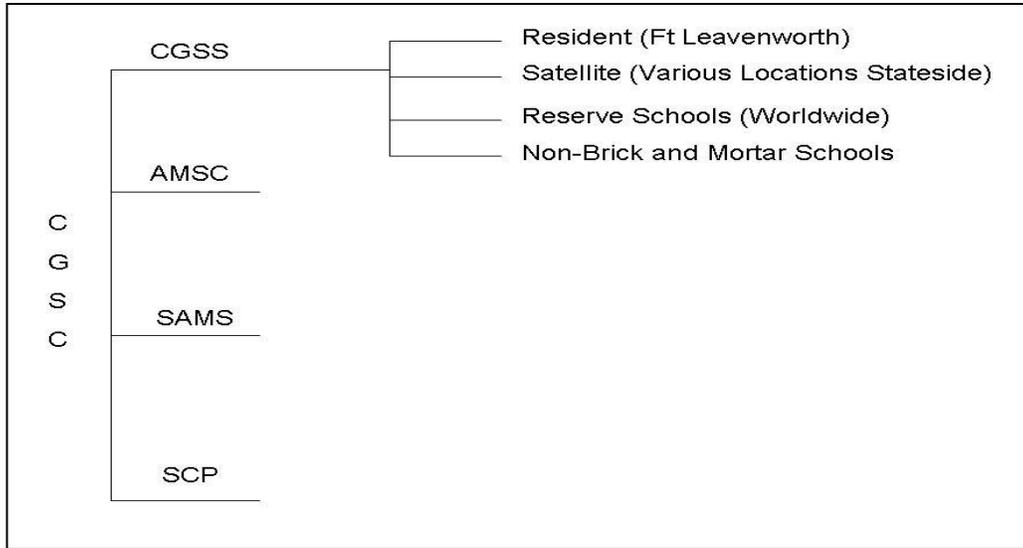


Figure 1. Four Schools of the Command and General Staff College

As an integral part of the Army Officers' PME Program, CGSS develops and administers the ILE program. Figure 2 illustrates the levels of PME and the ranks of officers the courses are designed to educate. The ILE curriculum is further broken down into ILE-CC and the AOWC. AOWC is the follow-on credentialing course to ILE-CC required for completion of joint professional military education level 1 (JPME-1). The ILE curriculum, ILE-CC and AOWC, educates mid-career officers, usually of the rank of major or equivalent rank from the Navy, Marines, Air Force, Coast Guard, Allied Nations, Department of the Army civilians, and Interagency personnel, such as the State Department.

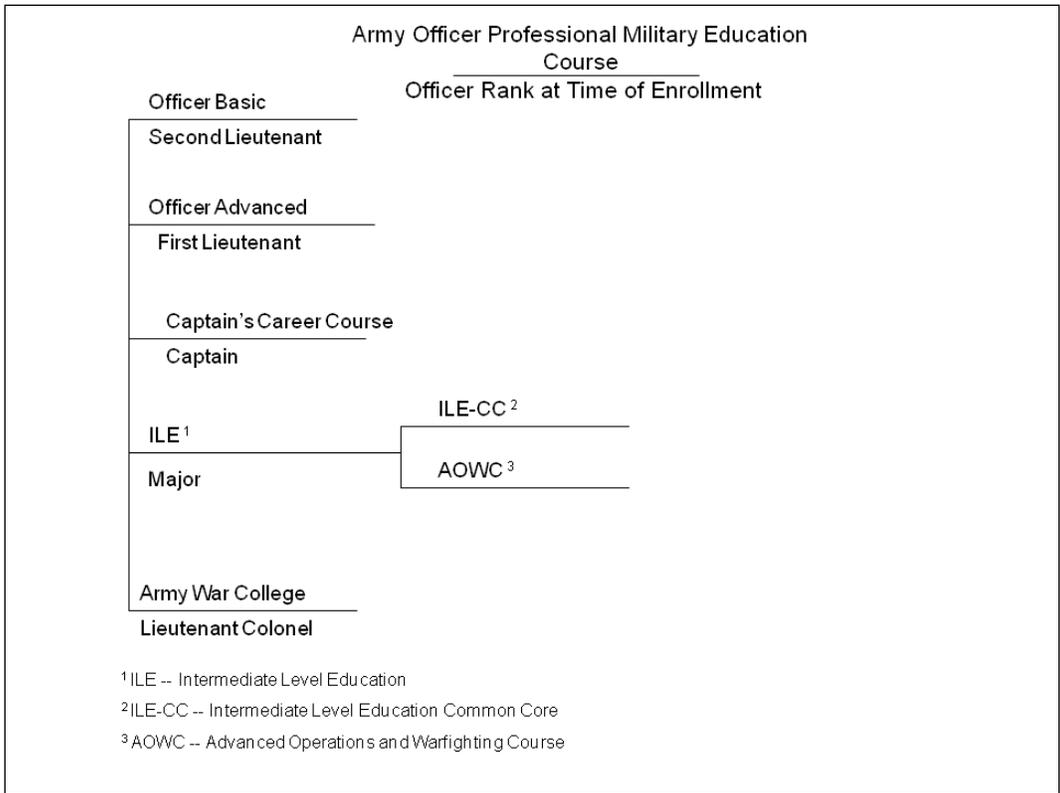


Figure 2. Professional Military Education Levels and Coordinating Officer Ranks

According to the USACGSC registrar's office, the entire enrollment for CGSS ILE was over 5,400 students. The student enrollment in the ILE distance education program comprised 51 percent of total enrollment. The enrollment for the ILE resident course at Fort Leavenworth equaled 20 percent, at the ILE satellite locations equaled 4 percent, and for the Reserve Schools equaled 26 percent (see Figure 3). With the distance education program student enrollment comprising the largest portion of ILE-CC enrollment, this program was a major part of United States Army PME.

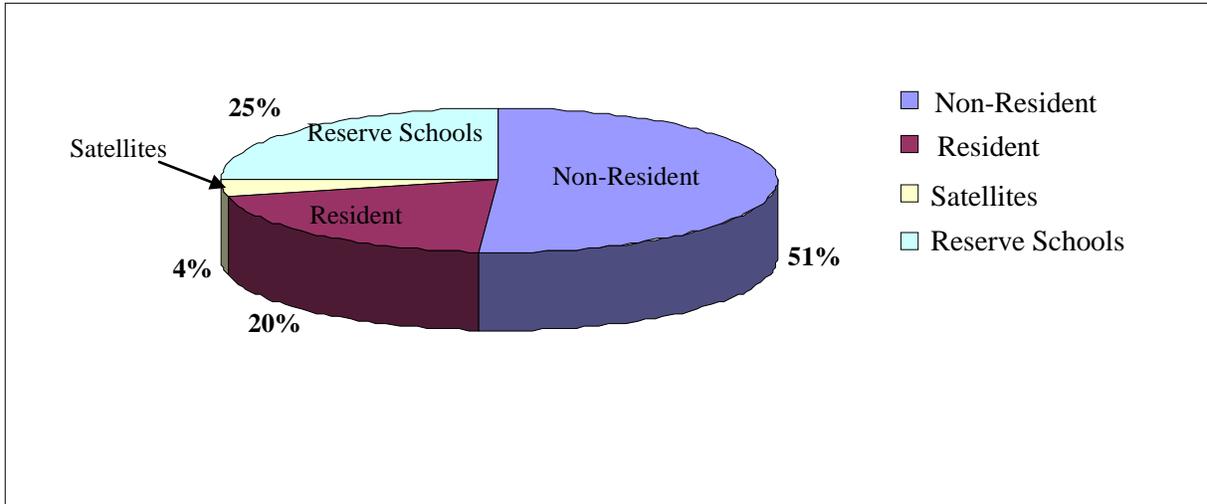


Figure 3. Command and General Staff College Intermediate Level Education enrollment percentages

The USACGSC is one of the many schools the Army utilizes to train and educate soldiers. “The U.S. Army Command and General Staff College (CGSC), established in 1881, is the Army’s senior tactical school and introduces officers to operational and strategic warfighting” (CGSC Circular 350-3, 2005, p. 1-1). The USACGSC course authors update the course curriculum regularly based on the latest contemporary operating environment, tactics, strategies, and results of surveys conducted among the resident and satellite students. However, the updating process for the USACGSC course authors did not include input from distance education students.

The CGSS’s Department of Distance Education (DDE) administers the Reserve Schools and the Distance Education Program. The mission statement of the CGSS DDE “is to develop leaders prepared to execute full-spectrum joint, interagency, and multi-national operations through non-traditional means” (CGSC Cir 350-3, 2005, p. 1-1). Students, both Active and Reserve Component, unable to attend the resident school at

Fort Leavenworth because of time, location, or other circumstances, enrolled in the Distance Education Program. According to the yearly Master Evaluation Plans, there had not been any previous study of student preferences for the distance learning programs at the USACGSC.

Organization of the Study

This study is comprised of five chapters:

- Chapter 1 is an introduction to the study with relevant background information.
- Chapter 2 is a review of the literature surrounding the practice of delivery of distance education in higher education arena and the non-resident program in the United States Army Command and General Staff College.
- Chapter 3 explains the method of the research, including participants and limitations.
- Chapter 4 reports the results of the study.
- Chapter 5 reports the findings and recommendations of the study.

Researcher Involvement

The researcher's interest in this topic began with her employment with the USACGSC distance education program beginning in March 2005. Because of the researcher's position, the decision was made, with the urging of the program's director, to enroll in the online ILE-CC course conducted by the USACGSC distance education program. The online delivery mode was new for the USACGSC. The researcher's

personal experience taking the course provided insight into the delivery of the course. In addition, the researcher is currently involved with institutional research and curriculum development at the USACGSC QAO.

In January 2006, this researcher became one of the first graduates of the USACGSC ILE-CC distance education program. At the time, this researcher was also the Distance Education Program's Curriculum Integration Team Chief. The experience, as a student and a member of the staff, helped develop the researcher's interest in distance education and the possibilities that exist in the distance education field, particularly as these possibilities apply to military distance education. This researcher saw the richness of the non-resident capabilities that could provide a robust program of instruction comparable with the resident program.

Definition of Key Terms and Acronyms

Advanced Distributed Learning: The use of technology to deliver curriculum to learners (Gibson & Helms, 2003).

AMSC: Army Management Staff College

AOWC: Advanced Operations and Warfighting Course

CAS3: Combined Arms Services Staff School

CGSOC: Command and General Staff Officer Course

CGSS: Command and General Staff School

Collaborative Learning: Students working with other students (Smith & MacGregor, 1992).

Constructivism: Students use existing knowledge to build new knowledge. Students have a major role in the learning environment (Bransford, Brown, & Cocking, 2000).

DDE: Department of Distance Education

Distance Education/Learning: “Education in which students take academic courses by accessing information and communicating with the instructor asynchronously over a computer network” (Distance Learning, 2007)

ILE: Intermediate Level Education

ILE-CC: Intermediate Level Education-Common Core

JPME: Joint Professional Military Education

Online Learning: “Learning delivered by Web-based or Internet-based technologies” (E-Learning Glossary, 2007).

OPMEP: Officer Professional Military Education Policy

PME: Professional Military Education

QAO: Quality Assurance Office

Salient Category: Salient categories are, based on the USACGSC QAO research standards, those categories with student responses constituting 5 percent of students responding to the open-ended question.

SAMS: School of Advanced Military Studies

SCP: School of Command Preparation

Trended Categories: Trended categories are, based on the USACGSC QAO research standards, those categories with student responses constituting 10 percent or more of students responding contributed comments to the category.

Summary

This study was designed to identify student preferences for delivery of the distance education curriculum of the USACGSC in order to improve student learning. The results of this study were made available to the Commandant of the USACGSC. The results provided recommendations for improving distance education curriculum based on student preferences in order to improve student learning.

Because students of the USACGSC distance education program are located worldwide, distance education provides these students the opportunity to receive the same education as resident students. Students unable to attend resident courses can continue their PME via distance learning.

The importance of improving distance education and thus improving student learning is supported by the high percentage (51%) of students enrolled in the USACGSC distance education programs and the increasing numbers for AOWC distance learning. The Profession of Arms requires a flexible military educational system capable of educating military professionals wherever assigned, at any career development level, and for any Army career field. The flexibility and portability of Distance Education allows military personnel the opportunity to continue their career advancing education whether stationed within the continental United States or at the many worldwide locations of today's Army.

CHAPTER 2 - Review of Literature

Introduction

The review of literature focuses on essential elements of non-resident course delivery. These elements drive the delivery methods for distance education. One factor that should drive delivery method is the preferences of distance education students with the goal to improve student learning. This review of the literature explored: What are distance education student preferences for curriculum delivery of the distance education curriculum of the USACGSC? Identifying student-preferred aspects of distance education provided the Commandant of the USACGSC with recommendations for a more robust program of instruction, for the USACGSC distance education.

This chapter contains the following sections:

1. Introduction
2. Flexible and Anytime, Anywhere Education
3. Correspondence and Online Education
4. Student versus Computer or Collaborative/Facilitated Communications
5. Asynchronous and Synchronous Delivery
6. Equivalent Education with Resident Schools
7. Student Preferences, Student-centered Learning and Improved Learning
8. History of Distance Education at the USACGSC
9. Statistical Analysis of Survey Data
10. Summary

Flexible and Anytime, Anywhere Education

Today, distance-learning programs provide a wide variety of delivery options. Although the resident schoolhouse will always exist, it faces competition from distance education programs. Most educational tools available at the resident schools are also now readily available by Internet. Students can access libraries and bookstores, contact instructors and other students, and receive lessons via Internet. Students can even participate in physical education classes by watching live video on the Web. “As teachers and students turn to the Internet, distance learning is dismantling classroom walls across America” (Barker, 2000, p. 88). As more students become comfortable with online courses, buildings become less important to student learning. Students also become more likely to attend institutions far from home as they can do so without leaving home.

Thomas Friedman (2007) emphasized that technology “does not make you modern, smart, moral, wise, fair, or decent,” but technology “makes you able to communicate, compete, and collaborate farther and faster.” Schools can reach students in far off locations and at any hour of the day or night (p. 536). These students can reach programs of higher education never before considered accessible from across the globe.

The ability to attend classes when the student is available makes distance education programs appealing. There is relatively little flexibility in resident classroom schedules, but with distance education, “. . . programs today do not require that students meet at the same time. Such programs allow virtually ‘anytime, anyplace learning.’ This is true of courses delivered over the Internet” (Barker, 2000, p. 88). The advent of the Internet increased opportunities for people, especially non-traditional students, to attend institutions of higher education. With distance education programs, United States Army

students can return to their unit areas after a security patrol late at night and continue their PME online.

According to Mangan (2001), distance learning is readily available to students. It is available through such means as computers, televisions, and telephones. It is education that is accessible at a time, place, location, and pace that is convenient to the user. In this busy, fast-paced culture, education needs to be available to students when the students are available, not at the convenience of the institution.

One of the strongest assets of distance education and in particular online distance education programs is flexibility. According to White's (2000) study of online learning, "students liked the flexibility of the online courses and the feeling of connection to other students and to the instructor when compared with print-based courses" (p. 66). The Internet allows students not only to take classes anytime, anywhere, but it also allows almost instantaneous communication among students and between students and faculty. The flexibility of online courses allows students to contact instructors and other students at anytime, and instructors and other students to respond at their convenience.

Living in various time zones spanning dozens of countries, United States Army soldiers need distance education programs to stay competitive with their peers in the PME arena. PME is designed to teach students to perform their duties within the Profession of Arms. According to Mangan (2001), for students in out-of-the-way regions distance education may be the only means to learn and upgrade skills. The Profession of Arms is a fluid profession requiring practitioners to participate in continuing education, while simultaneously operating their posts worldwide.

Since the Internet is available worldwide, distance education students have the latest curriculum material available at the nearest networked or modem connected computers. “Online learning offers opportunities to reach populations that would otherwise not have access to higher education” (McEwen, 2001, p. 98). If students find the time and motivation, they can obtain the educational material necessary to improve their skills and knowledge anytime, anywhere.

Many students favor the flexibility and anytime, anywhere characteristics of distance education over resident schools.

Taking the course on the Internet allows students greater flexibility and access to coursework, which for some students was a higher priority than face-to-face interactions they have experienced in an on-campus course (Card & Horton, 2000, p. 235).

Distance education is not for all students; however, for many students it is either their only choice because of their life situations or it is their preferred method for taking courses.

The flexibility of distance education is not just for students located far away from an institution. With technology, instructors and students have additional tools for accessing course material and communication.

E-learning is considered the latest advance in technology-based learning. It is generally regarded as electronic delivery of learning on the Web, or Internet-enabled learning. E-learning is seen as an alternative to taking courses in the traditional classroom setting, providing flexibility and convenience in education (Charp, 2001b, p. 10).

Students and instructors have the ability to communicate and share materials with online tools such as email, discussion boards, and chat rooms. This interactivity increases the student-learning capability.

Both the traditional USACGSC correspondence course and the USACGSC online course provided flexible, anytime, anywhere education. The online course required connectivity to the Internet. The traditional correspondence course provided all curriculum material in a printed package. The online ILE courses for soldiers enabled communications with school personnel via online tools.

The flexible, anytime, and anywhere education afforded by distance learning existed for the United States Army. Army institutions, including the USACGSC, often adopted online tools and educational advances developed in civilian educational institutions. The USACGSC was maximizing technology as suggested by Notar, Wilson, and Montgomery (2005). Distance learning did not excuse instructors from involvement with student learning. Distance learning enhanced the ability of students to obtain education, but technology is a tool to leverage learning not to replace instruction.

Correspondence and Online Education

Distance education was an umbrella term that included correspondence courses and online courses. At one time correspondence courses were advertised heavily on television, in magazines, and in newspapers. The USACGSC offered education to distance education students by mail beginning in 1909. Mail correspondence courses were the only delivery mode for non-resident students at the USACGSC until the twenty-first century. One of the greatest benefits of online distance education over

correspondence courses was the ability for students to feel connected to the institution (White, 2000). Mail correspondence courses relied on the speed and dependability of mail services. Online distance education courses rely on the speed and dependability of the Internet and its supporting networks. As the networks that support Internet use improved, so did the speed and reliability of online distance education.

Online distance education fits somewhere between the face-to-face classes that provide interaction with an instructor and correspondence courses with little opportunity for students and instructors to interact (Schwartzman & Tuttle, 2002). However, even with face-to-face classes, a student may be in a lecture hall with hundreds of other students listening to a graduate teaching assistant reading course material. As with face-to-face classes, online classes can be collaborative and facilitated through email, online discussion boards, instant messaging, and online chat rooms.

Distance education can provide flexible, anytime, and anywhere educational opportunities to many people (Heerema & Rogers, 2001). In addition, instructors can tailor online courses to meet the needs of individual students and provide a conduit for the communication of ideas.

The USACGSC has a history of correspondence courses and now online courses. The vision of the USACGSC, as posted on its webpage, was to produce “Successful Graduates leading teams to solve complex problems throughout the spectrum of operations” (About the Command and General Staff College, 2007). The USACGSC vision included graduates of both resident school courses and the distance education courses. The coursework for distance education students at the USACGSC has evolved over a century with new educational theories and practices incorporated through

curriculum changes. Because of the need for anytime, anywhere distance education, professional military education offered online for US soldiers stationed far from home was more important than ever. Recognizing this need, the distance education program at the USACGSC evolved from the correspondence box of books mode to the online computer-based mode of delivery, and then evolved to the asynchronous facilitated and collaborative mode of delivery.

Student versus Computer or Collaborative/ Facilitated Communications

Online courses were either facilitated by an instructor or non-facilitated. Non-facilitated courses were more or less what McEwen (2001) refers to as “student versus computer.” Facilitated courses used communication tools to augment instruction .

The facilitation tools allowed instructors to monitor student progress. Communicating with students allowed instructors to provide feedback to students and allowed students to provide feedback to instructors. This ability to provide and receive feedback made instructor communication with students time consuming. “Instructors must devote more time, including late evenings and weekends, to interacting with students. Responding to individual emails is much more time-consuming than clarifying a point to everyone in a traditional classroom” (McEwen, 2001, p. 98). However, with the use of tools such as online discussion boards, instructors electronically posted questions and answers for the entire online class. This technique emulated the question and answer phase of resident classrooms.

Interaction built into online courses was critical for effective course delivery and increased student success. Peterson (2004) stressed interactivity in curriculum delivery.

When instructors emphasized interactivity, students learned from each other and shared experiences with each other.

Students reluctant to speak to instructors face-to-face benefit from the online interactive communication tools (Schwartzman & Tuttle, 2002). The ability to ask instructors and peers for clarification via these tools improved the learning experience for students in the online environment.

Part of an important educational experience was for students to be active in the learning environment. Just as in a resident classroom, the online instructor was expected to monitor students and to keep all students involved in the course. Instructors needed to keep track of student communication, just as if they were keeping track of student participation in a resident classroom. Without person-to-person contact, students might not voluntarily provide input (Schwartzman and Tuttle, 2002).

Instructors with online tools can require interactivity among students. This interactivity allowed instructors to form learning communities. Students in an online environment can rely on each other and can work together. “Using the Web, teachers and students can more easily form learning communities extending far beyond the classroom” (Barker, 2000, p. 88). These learning communities provided students the opportunity to complete coursework while learning from each other as well as challenging other students’ assumptions and ideas.

The learning community allowed members to benefit from other students’ knowledge. “These virtual communities emerge in cyberspace whenever a group of learners in different locations carries on public discussions with sufficient human interaction to form learning relationships” (Barker, 2000, p. 88). These public discussions

occur in discussion boards or chat rooms. With discussion boards, students do not need to be on the Internet at the same time, or asynchronous. Chat rooms require students to be on the Internet at the same time, or synchronous. Either tool allowed students to share learning and personal experiences. Discussion boards and chat rooms were tools for instructors who required interactivity as part of the curriculum.

With students spread across multiple time zones, asynchronous communications are more advantageous than synchronous communications. Of course, if students are geographically close, synchronous communications do not create the same issues with time. Discussion boards are easier for instructors to monitor. Email allowed students and instructors to compose their thoughts before sending. Thus, email allowed students to more effectively communicate since the students had an opportunity to edit their thoughts before sharing them with their peers and instructor.

In a study of distance education by Card and Horton (2000), students provided their perceptions of group learning. According to the authors, students “perceived that the cooperative learning groups helped them to learn the material, to be accountable and responsible for doing the reading, and to seek to understand other students’ opinions” (p. 235). The group experience gave students motivation to participate in their education.

Yet another benefit of email communication is that it allowed both instructors and students to keep a record of communications. Regular communication ensured students were actively involved in the course (Orde et al., 2001). Instructors must consider email communication and bulletin board maintenance when considering the time it takes to facilitate online classes.

The USACGSC online distance education courses also ran the gamut from student versus computer or collaborative and facilitated communications. From the inception of online distance education at the USACGSC in 2004, ILE-CC course was delivered non-facilitated and non-collaborative. Students were on their own to complete the coursework. The Advanced Operations and Warfighting distance education program, since its inception in 2005, was delivered, facilitated, and collaborative. Army contracted instructors to facilitate student learning and assist students in collaboration.

Asynchronous and Synchronous Delivery

Adult learners especially benefited from asynchronous delivery. Because of busy schedules, adult learners often cannot fit their schedules around traditional school course schedules. A study of one program found,

... much of class work took place in a virtual space that could be accessed and participated in from multiple spatial and temporal spaces, thus meeting the needs of class students. The largely asynchronous delivery mode of the course provided freedom and flexibility in dealing with the constraints of resources such as time, space, money, and personal and family relationships (Barab, Thomas, & Merrill, 2001, p. 105).

Asynchronous delivery fits into busy student schedules.

Asynchronous delivery allowed students from many time zones to participate as a class or a learning community. “Not surprisingly, time-insensitive distance learning via the Internet is growing much more rapidly as an educational delivery medium than such time-sensitive delivery systems as satellite, fiber optic, cable, or other TV-based

networks” (Barker, 2000, p. 88). For those students needing the most flexible, anytime, anywhere learning, asynchronous delivery was more beneficial than synchronous delivery.

The asynchronous delivery of courseware was more convenient than face-to-face delivery of courseware because students can log on at their convenience to receive an education. Students needed just the ability to log onto a computer and the Internet to participate in a course (Schulte, 2004). Replacing resident classrooms allowed educational institutions to reach more students in more places. In addition, with the ability to include many of the amenities of a resident campus, institutions provided for most of the educational needs of distance education students.

For Barab, Thomas, and Merrill (2001), there existed an opportunity for higher learning through distance education. The authors “contend that asynchronous, computer-mediated communication tools actually promote reflective and critical thinking, allowing for deep and meaningful learning to occur” (p. 105). This observation lends itself to the theory that distance education can provide a learning experience equivalent or in some cases superior to a resident school.

With synchronous delivery, the class meets at a predetermined time on the Internet.

One form of distance education that has benefited from recent technological developments has been interactive distance education. In this form of distance education the teacher and students, although physically separated, can see and hear each other through two-way audio and video communications thus providing a real-time teaching/learning environment (Carter, 2001, p. 249).

The inexpensive web cameras available today made this type of delivery affordable to more people. Using a program such as Adobe Connect, students and instructors communicated in real time and shared computer desktops and files.

At the USACGSC, distance-learning courses used either all asynchronous delivery or asynchronous and synchronous delivery. The asynchronous and synchronous delivery included collaboration (interaction with other students) and facilitation by instructors. This modality was available with the USACGSC Advanced Operations and Warfighting Course (AOWC). Students completed modules online, but also interacted asynchronously online with other students and instructors, also known as facilitators. AOWC students also took assessments online. The online course system posted grades to the student grade database automatically. This course involved four modules: a prerequisite module, a brigade module, a division module, and a corps module. This course was available to students who successfully completed ILE-CC (see Figure 4).

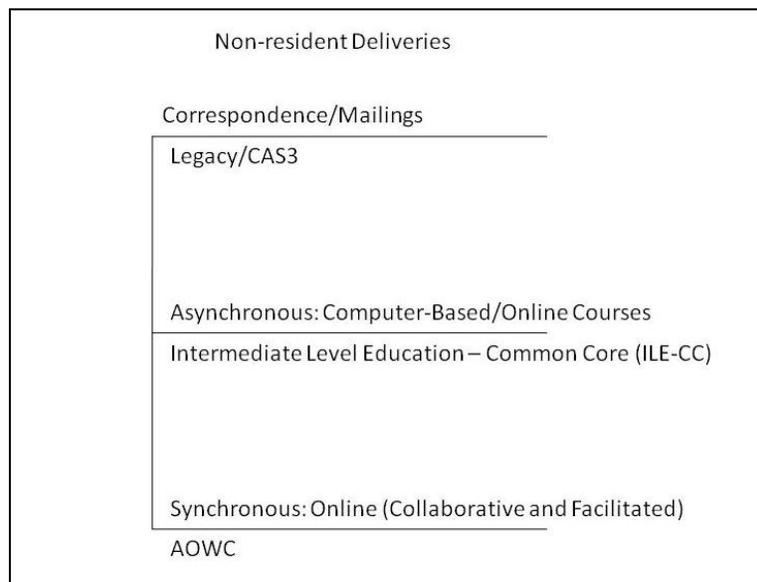


Figure 4. Non-Resident Deliveries

Equivalent Education with Resident Schools

A study of distance education students by Schwartzman and Tuttle, 2002, underscored the ability of distance education programs to be superior to resident programs. Students had access to instructor-generated notes, course videos on demand, and any PowerPoint presentations provided by the instructors. Students had ready access to all material at the touch of computer keys and the click of a mouse. Resident students must rely on accurate note taking and retention of information presented in live lectures. In online courses, the instructor can upload material to the Internet for student access.

Of course, resident students can also benefit from material uploaded to the Internet. To ensure course equivalency, instructors needed to plan carefully. Distance learning students needed access to the same materials as resident students (Orde et al., 2001). Non-resident students should have the material accessible before they need it.

Online education, with the explosion of technologies, provided a plethora of tools for providing learning opportunities to students. The wide-variety of multi-media tools helped instructors provide course material to online students (Peterson, 2004). Distance education programs were capable of providing an equivalent education to resident programs.

Accreditation for non-resident courses at the USACGSC required equivalence. Distance education students received curriculum from the USACGSC in the three modalities of non-resident education mentioned earlier. Through the distance education program at the USACGSC, the school provided students courses through the mail; through the Internet with student-computer interaction only; and through the Internet using a blend of student-computer interaction, student-student interaction, and faculty-

student interaction. Students in the Legacy Course and CAS3 course, phase I, received a stack of reading material and assessment material to complete on their own. The DDE students in the Intermediate Level Common Core Course received modules online to complete on their own. Students in the AOWC received a facilitated collaborative delivery.

The USACGSC, through DDE, strived to provide an educational experience for non-resident students as closely equivalent to the resident program as possible. The Officer Professional Military Education Policy (OPMEP), CJCSI 1800.01C (2005), stated:

Non-resident curricula and related educational products and materials should derive from and closely parallel the Program of Instruction (POI)/curriculum of their respective resident institutions. The differences between the two types of programs are primarily in the specific delivery methodology and techniques employed to achieve the PME (Professional Military Education) and JPME (Joint Professional Military Education) learning objectives (p. B-5).

Through the evolution of modalities, the distance education program strived to improve upon the delivery of curriculum through implementation of the latest distance education practices and provided an equivalent education to resident versions.

Student Preferences, Student-Centered Learning and Improved Learning

Charlotte Danielson (1996) emphasized that, in a community of learners, students not only decide what is taught, but also how it is taught. The approach of using student involvement in deciding methods for delivery helped increase engagement in the

coursework. Using information indicating student preferences was a method for improving student learning (Marzano, 2003). The study of distance-education student preferences was a method for improving student learning. This became part of the framework for implementing changes in curriculum.

Wiggins and McTighe (1998) recommended a backward design of courseware. This backward design included asking, “What learning experiences and teaching promote understanding, interest, and excellence?” (p. 64). Taking into account student preferences in learning experiences was one method for answering part of this question. In other words, to develop courseware to improve student learning, the designer needed to understand students. This was accomplished by obtaining data from student opinion surveys. “Students know whether or not the design helped them understand, regardless of their youth or inexperience in a subject” (p. 192). Allowing student input in the development of courseware provided developers the opportunity to implement information relevant to student learning.

It is the responsibility of educators to investigate how the use of educational tools (i.e., the Web) might influence the educational experience. The educational tools not only support student learning but also the ability of researchers to learn from their experiences (Barab, Thomas, & Merrill, 2001, p. 105). Educational programs have used student opinions on faculty effectiveness for years.

According to Diaz (2000), constructivist education was led by students and this method improved student learning. Constructivism was based on students building their own knowledge through their own experiences and their own prior knowledge. In this theory, the instructors are guides and do not feed knowledge to students, and time and

distance was less essential than in instructor-based theory. In the constructivist theory, by exploring student preferences for distance education, the delivery of distance became more relevant to students and therefore, students were more comfortable learning.

Student preferences, student-centered learning and improved learning was the focus of faculty development at the USACGSC. The USACGSC Faculty and Staff Development (FSD) Division was responsible for preparing faculty to instruct the USACGSC curriculum. The intent of FSD was to develop a faculty that understands how to improve student learning. The FSD Division developed instructors to teach in a student-centered adult learning environment in order to improve student learning. The instructors at the USACGSC were prepared to facilitate student-centered classrooms and to encourage student dialogue.

History of Distance Education at the USACGSC

The USACGSC is no stranger to distance education. At the inception of the USACGSC in 1882, its mission was to educate Army officers. Starting in 1909, the USACGSC sent out lesson material to officers on a mailing list. The USACGSC was “organized under the provisions of General Orders No. 42, War Department, of May 7, 1881” as the United States Infantry and Cavalry School. According to a report retrieved from the archives of Combined Arms Research Library, Fort Leavenworth, Kansas, and listed in the archives as “Command and General Staff College Annual Report of 1882-1936,” distance education for the USACGSC became a reality in 1923, almost forty years after its first resident course. From the beginning of the 20th century, the USACGSC reached out to officers through distance education programs.

As the USACGSC evolved, the distance education program underwent numerous name changes. These name changes reflected the evolution of curriculum to meet the needs of an Army in transition. The Annual Report for 1904 listed the school as General Service and Staff School. The school also went from graduating one class every two years for the two-year course of study to a class graduating annually. This report stated that the USACGSC reorganized into two separate schools to include the “Staff School” (Command and General Staff College, 1904).

The 1909 Annual Report was the first report to mention a mailing list. According to the report, “This list of officers throughout the service, who desire copies of all our problems and exercises sent to them and who are following our work, has grown to 500 and is still increasing” (Command and General Staff College, 1909, p. 14). By the Annual Report of 1909, the mailing list membership had grown to about 1,500 soldiers.

During the last two years there has grown up at this institution what is called a ‘Mailing List.’ The ‘Mailing List’ consists of all problems with approved solutions, books, pamphlets and other printed and mimeographed matter issued by the several departments of this institution. A copy of each problem with approved solution book and pamphlet was sent to each officer on the ‘Mailing List’ (Command and General Staff College, 1909, p. 8).

Although a good start, according to the Annual Report of 1910, the material furnished to the Mailing List members reflected only part of the total curriculum offered (Command and General Staff College, 1910, p. 13). At this time, students receiving instruction through the mailing list mode of delivery were not receiving the full curriculum as distance learners receive today. “In consequence the mailing list cannot be

considered as a correspondence course, but rather as an example - a mere taste of the instruction that is being given at the schools” (Command and General Staff College, 1910, p. 13).

The distance education program actually reached more officers than the resident program. “The ‘Mailing List’ matter will reach thousands of officers, and while it is probable that all of them do not make use of the matter, it is believed that a great majority make a thorough study of each problem (Command and General Staff College, 1911, p. 8-9). There was even a correspondence school for medical officers as indicate in the 1913 report: By 1915, the mailing list had grown to

nearly 4,000 names of officers (Reserve and National Guard), college and university students and others interested in military studies, to whom was furnished problems, maps and similar material at a very small expense-- practically at cost. The benefit in awakened interest and in promotion of military knowledge and efficiency was far reaching (Command and General Staff College, 1915, p. 12).

The college clearly recognized the need to educate students beyond the reach of the resident schools.

The 1921 Annual Report revealed that the school produced printed material for distribution.

A policy has been adopted for the schools of placing, as soon as practicable, all basic instructional matter in textbooks. In addition to disseminating the school teachings to the army at large, this scheme will enable insure stability and

uniformity in doctrines and principles (Command and General Staff College, 1921, p. 11).

The printing of the instructional material provided an easier way to distribute the curriculum to distance education learners.

To handle the distance education material, the school established a Publication Department on December 23, 1921, according to the Annual Report of 1922 (Command and General Staff College, 1922, p. 7). The department functions included “supervising and preparing documents for ‘Mailing List’” and “preparation and conduct of any Correspondence School course prescribed” (Command and General Staff College, 1922, p. 7). The report also mentioned “Correspondence School Course D” (p. 28). According to the report,

pursuant to instructions from the War Department, these schools are charged with the preparation of Correspondence Course D. The purpose of this course is to provide for the further military training and education in command and higher staff functions, by correspondence school methods, of commissioned personnel of the National Guard, Organized Reserves, and selected civilians, authorized to take such courses (Command and General Staff College, 1922, p. 36).

The US Army saw the potential of providing the USACGSC curriculum to all Army officers, Active and Reserve Component, an advanced military education, using correspondence programs. However, the ensuing years saw a lack of the school keeping up with the latest changes in educational delivery. The delivery of a paper-based correspondence course continued into the twenty-first century.

By 1923, the “Course ‘D’ Correspondence School had, in a measure, taken the place of the ‘Mailing List’” (Command and General Staff College, 1923). The students received curriculum material through the mail in a disciplined program of study to include assessments. In 1923, the USACGSC renamed the distance education program from Publication Division to Command and General Staff Correspondence School, an indication of the evolving nature of distance education to a serious course of study.

The USACGSC developed the correspondence course for Reserve and National Guard officers, according to the 1923-1924 Annual Report (1924); however, active duty officers and the Garrison School also used it. The report projected growth for the Correspondence School over the following years. The Army again recognized the benefits of providing a flexible program of study for all officers. Included in the Commandant’s Annual Report for 1927-1928, the Director of the Command and General Staff Correspondence school considered a name change that better represented the distance-learning program. His suggestion was to refer to the course as an extension course or home study course instead of a correspondence course.

Therefore, there was an attempt to improve perception of the program by reflecting the true nature of the program through its title. A change in delivery mode involved students reading material sent by the school. Students completed assessments in both tests and essay form, and mailed the assessments to the school for grading. The school staff graded the assessments and returned the grades to students in the mail. School rules in place required students not to collaborate. Students were to work on their own, and there was a lack of instructor-student interaction.

According to the USACGSC Catalog for academic year 1994-1995, the Combined Arms Services Staff School (CAS3) was added to the courseware for the USACGSC. This course for Captains was implemented in 1979. The first class graduated in 1981. In 1984, the Army decided to implement a Reserve Component CAS3 course (CGSC Circular 350-1, July 1994). The Phase I portion of the CAS3 course was conducted like the Legacy Course, as a distance education course. The USACGSC discontinued the Phase I portion in October 1998. The final CAS3 class graduated in 2004.

In the ensuing years, curriculum changed but the mode of delivery of distance education continued with the Box of Books. Students took tests using paper forms that they filled in small bubble with a number 2 pencil, and a computerized scanner graded the mark-sense forms. With new curriculum, the USACGSC developed an online program for ILE-CC, taught as a resident course. The school piloted this new mode of delivery in the summer of 2004; the program opened for enrollment in October 2005. By 2007, all modules were workable online or were downloadable for students to complete offline. Students completed quizzes online. However, students continued to mail in essays for grading. While institutions of higher learning in the United States embraced technology to reach distance education students, the USACGSC continued to use elements of the old correspondence course method for delivery of courses (see Figure 5).

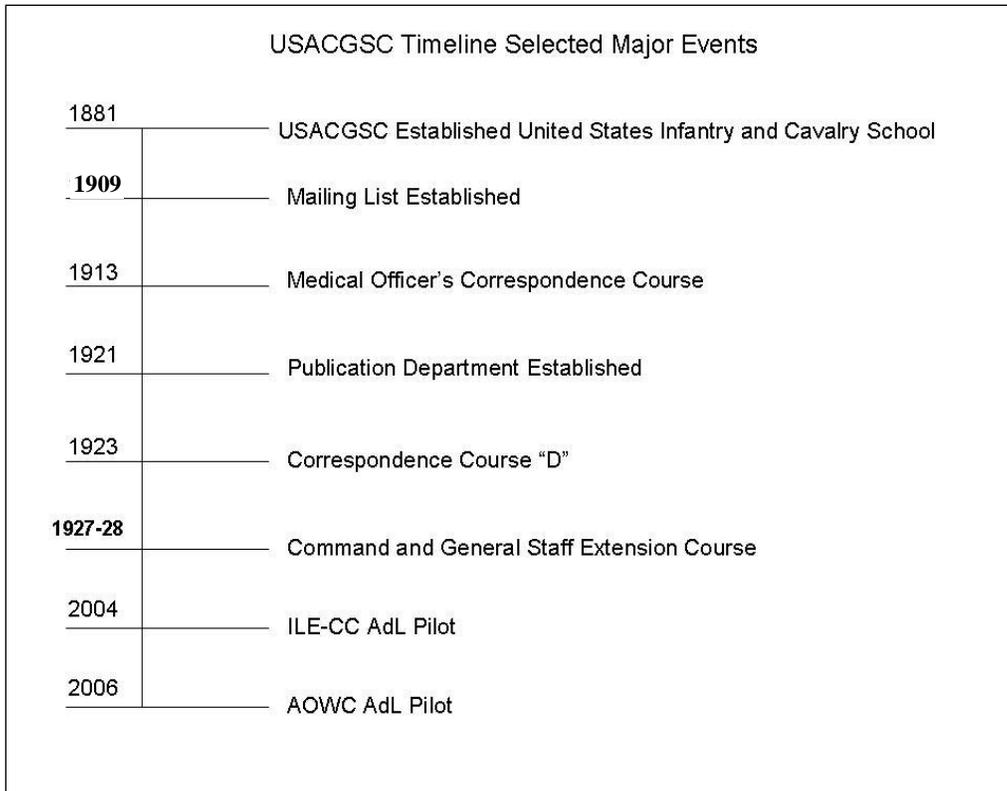


Figure 5. The USACGSC Timeline of Selected Major Events

According to Bates and Poole (2003), distance education has been around for a long time.

For Christians, St. Paul's epistles to the Corinthians and the Romans in the first century A.D. could be considered a form of distance education. In 1840, Isaac Pitman started to use the Penny Post to teach the phonographic shorthand that he had invented. Correspondence education gradually developed into what became known in North America as guided independent study (p. 121).

Much like the way historical educators St. Paul and Pitman reached out to educate the public, the USACGSC developed the mailing list in an effort to change how the

USACGSC reached out to non-resident students. There is a natural desire in education to seek change for improvement. As many changes occurred in the distance education arena, so it was also true with Army distance education. The USACGSC QAO staff conducted educational research to ensure changes improved the curriculum and delivery methods the school employs. The school has a dedicated QAO staff to perform institutional research to ensure continuous improvement in teaching and learning within the USACGSC.

The USACGSC provided online modules for the ILE-CC follow-on AOWC. The pilot for two of the modules of AOWC began in the spring of 2007. These modules were facilitated and collaborative. There was instructor-student interaction and student-student interaction. Students had modules to complete on their own; however, the instructors communicated with students at least weekly and encouraged students to collaborate. Students communicated both asynchronously and synchronously (see Table 1).

Table 1. Methods of Curriculum Delivery for the Three Courses Offered through the USACGSC

Methods of Curriculum Delivery	Legacy/CAS3	ILE-CC	AOWC
Printed course material	X		
Taking tests on Mark Sense Forms (bubble sheets)	X		
Submitting tests via mail to USACGSC non-resident program for grading	X		
Having tests results returned via mail	X		
Submitting essays by mail to USACGSC non-resident program	X	X	X
Having essay results returned by mail	X	X	X
Reading material provided online		X	X
Scanning material provided online		X	X
Finding test answers in the reading material provided online		X	X
Taking tests online		X	X
Immediate posting of test grades online		X	X
Essays submitted by mail to USACGSC non-resident program	X	X	X
Essay results returned by mail	X	X	X
Limited facilitation by USACGSC faculty		X	
Online access to the Combined Arms Research Library		X	X
Collaboration with other students			X
Facilitation by USACGSC faculty			X
Online access to the Combined Arms Research Library		X	X

Statistical Analysis of Survey Data

The USACGSC QAO has a set standard for analyzing statistical data for course improvement decisions. The standard of more than 66 percent favorable responses is a filter to determine whether the number of favorable responses meets the criteria for change. If the favorable responses were equal to or less than 66 percent, there is no indication for change. In 1985, the USACGSC Deputy Commandant approved the policy setting the standard for research at the USACGSC (Bitters, 2000). (See Appendix C).

For responses to open-ended questions, the USACGSC QAO codes the responses using a method of finding categories that are gleaned from reading the responses and discovering key themes. These responses are grouped into salient and trend categories. Salient categories are defined by the USACGSC QAO as those categories with student responses equal to or more than 5 percent and less than 10 percent of responses to the open-ended question. Trend categories are defined by the USACGSC QAO as those categories with student responses constituting 10 percent or more of responses.

Summary

This review of literature focused on essential elements of non-resident course delivery and provided historical context for the development of these methods for the USACGSC. These essential elements drive the delivery methods for distance education. One factor that should drive delivery method is the preferences of students to improve student learning. Identifying student-preferred aspects of distance education provided the Commandant of the USACGSC recommendations for a more robust distance education program of instruction comparable with its resident program.

CHAPTER 3 – Methodology

Introduction

The purpose of this chapter is to describe the method used to identify student preferences in delivery of the USACGSC non-resident curriculum to develop delivery to improve student learning. These curriculums are offered through the Legacy Course, ILE-CC Course, and AOWC. This chapter contains the following sections:

1. Introduction
2. Survey Design
3. Census Participants
4. Protection of Human Rights
5. Procedures for Data Collection
6. Procedures for Data Analysis
7. Limitations
8. Summary

The findings of this research are useful when the USACGSC rewrites its distance education programs and in the larger picture are useful to civilian higher education institutions building adult learning distance education programs. Knowing the successes and failures of the USACGSC distance education program can be beneficial in replicating the program's successes and avoiding its failures.

Survey Design

According to Clark and Mayer (2003), using information obtained from students to make course changes is called “formative evaluation” (p. 43). Surveying student preferences allows students familiar with the material to help course developers tailor the course to help future students learn successfully.

The survey design was an online survey. The data were summarized numerically and graphically using charts and graphs as recommended by O’Sullivan, Rassel, and Berner (2008). The intent was a comprehensive, thorough evaluation of student preferences for reading material delivery, instructional methods, interaction with other students, and research methods. This survey was designed to investigate concepts at the USACGSC not previously studied and to develop a detailed picture of student preferences for distance education delivery.

The main research question was: What are student preferences for the delivery of the USACGSC distance education curriculum? The sub-questions were:

1. What are student preferences for course material delivery?
2. What are student preferences for instructional methods?
3. What are student preferences for collaboration with other students?
4. What are student preferences for research?

The online survey included demographic questions, ranking questions, Likert scale questions, and one open-ended question. The ranking questions asked respondents to rank course material delivery, instructional methods, interaction with other students, and research methods based on students’ preferences. The five-point Likert scale questions asked respondents to rate course material delivery, instructional methods,

interaction with other students, and research methods by addressing a statement and selecting from the terms *strongly agree, agree, neutral, disagree, or strongly disagree*.

The USACGSC statistician recommended the Likert scale categories based on those used by CGSC QAO for internal and external surveys. The open-ended questions asked respondents to provide their thoughts on the question “From your experience with other online programs, what other strategies would you like to see used in the distance education program at the Command and General Staff College?” It was assumed all students had distance learning experience because they were enrolled in the online AOWC.

Every effort was made to design the survey instrument for maximum participation by the population. The online opinion survey instrument was tailor designed, as recommended by Dillman (2007), with the purpose of “attempting to identify and utilize knowledge of sponsorship, the survey population and the nature of the survey situation in an effort to maximize quality, and quantity of responses” (p. 26). The identification and knowledge of sponsorship, the survey population and the nature of the situation was provided by the instructors letting the students know the survey concerned the AOWC and that it was important to the distance education program, an email from the researcher explaining the study prior to sending out the survey and further explained in the survey invitation.

The survey questions were designed for clarity and coherence. This was accomplished with the help the USACGSC QAO statistician, a professional panel, and a pilot group. “The goal of writing a survey question for self-administration is to develop a query that every respondent will interpret in the same way, be able to respond to

accurately, and be willing to answer” (Dillman, 2007, p. 32). This type of query reduced measurement error (missed questions) by good design of the instrument (Dillman, 2007). Additionally, respondents were able to navigate the instrument easily with no missed questions.

The draft online survey was submitted to a professional panel knowledgeable about the field of distance education. The names and short biographies of the professional panel are in Appendix H. As suggested by Stewart, Hong, and Strudler’s (2004) study, the survey instrument was initially reviewed by this professional panel. The professional panel reviewed items for “clarity, grammar, spelling, and level of readability” (p. 135). Dillman (2007) also supports this strategy. Three members of the professional panel suggested changes. Based on the panel’s recommendations, the survey instrument was revised (see Table 2). Two open-ended questions were removed from the survey. Prior to launching, the final version of the online survey was submitted to the Kansas State University Institutional Review Board and the USACGSC Institutional Review Board for approval.

Table 2. Professional Panel Comments

Please review the survey instrument and provide comments about “clarity, grammar, spelling, and level of readability.”	
Professional Panel Comment	Researcher Action
Needs question concerning Internet Experience.	Question Added “Internet and Distance Learning Experience”
Add question about library usage.	Added questions on effectiveness of using CARL online, a physical library and other online research
Stress the importance of the survey	Added to introduction page “Again I cannot stress enough how valuable your help is to this research study.”
Use only one open-ended question	Two open-ended questions were removed and the third question was modified to allow students to suggest strategies for the program.

Another survey instrument validation used to determine the survey instrument measures what it was intended to measure is a technique recommended by Dillman (2007). This technique was a pilot test. Volunteers familiar with the USACGSC distance education programs checked the survey instrument for “clarity of direction and items posed” (p. 136). These volunteers, six students of the USACGSC distance education program, not in the AOWC course, completed the online survey and commented on its ease of interpretation and use from the student point of view. The researcher for this study used this pilot test technique to gain additional feedback for modification of the survey instrument. Anderson (1990) recommended that if an instrument has been newly developed, a test pilot of six to twelve participants should be used to test to make sure it is a valid and reliable instrument. These participants were asked to complete the survey and comment on the time needed to complete the survey and the ease of completing the survey. All pilot participants completed the survey in less than fifteen minutes. Four pilot

participants provided written comments. (See Table 3). Comments from the pilot students are at Appendix J.

Table 3. Pilot Student Comments

Do you have any suggestions to improve the survey?	
Pilot Student Comments	Researcher Action
1. No; it was clear and painless!	No Action Taken
2. Have a background. Stark white is not the best. Welcome page is a bit wordy. Get rid of the opt-out link on the survey invitation and reminder. All-in-all, it's good though.	Background color changed
3. After the question about "Connectivity during your CGSC coursework" I would also add a question as to WHERE the most often used	Question Added "Where did you most often connect to the Internet to do your coursework?"
4. Connectivity was from -home/work/class site etc.	Question Added "Where did you most often connect to the Internet to do your coursework?"
5. Online experience-this just seems to hang here.....what is it you are really trying to get to here????? Are you trying to ascertain that there is a difference between those who use the internet anyway being comfortable and those NOT using internet NOT being comfortable--would add "I am comfortable using the internet for general use	Question added "I use the Internet for everyday use."
6. Would you not want to know WHY they are in distance this could have an impact on their answers? Did they choose distance because they prefer this method, or because they had no other choice. . . . And if no other choice . . . have them pick the reason--schedule; location/availability of classes; deployment; other	Question added "Why do you take online courses?"
7. Change the font to arial, verdana or sans serif. It displays better on the screen and is pretty much a web standard.	Changed font to Arial.

Census Participants

The population for the study was the entire group of the USACGSC distance education students identified as enrolled in the distance education AOWC. The AOWC distance education coordinator provided the researcher the email addresses of the 176 students within the population. Of the 176 students invited to participate in the survey, 90 students responded, or a response rate of 51 percent. The calculated margin of error for

this response rate was plus or minus 7 percent. The response rate of 51% was well within Dillman's (2007) recommendation for an appropriate survey response rate.

Protection of Human Rights

The researcher completed the necessary modules for the Kansas State University (KSU) Institutional Review Board (IRB) and received notification of completion of the six modules on October 23, 2007. The researcher submitted application to the USACGSC QAO for IRB permission to conduct research with the USACGSC students. The researcher determined, through the information provided in the modules, that the research would not subject participants to physical, social, or human risks. There was no physical contact between researcher and participants. At Appendix A is the KSU IRB approval, dated April 24, 2009. At Appendix B is the CGSC QAO IRB approval, dated March 16, 2009.

The researcher provided written assurance in the initial invitation and subsequent email contacts, that participation was voluntary and participants could exit the survey at any juncture of the study if they chose to stop. The researcher provided the students with a letter with complete disclosure of the scope of the survey and its voluntary nature. A copy of the letter is at D.

To ensure compliance with the Belmont Report issued by the Department of Health, Education, and Welfare in 1979, the researcher followed the guidelines of the KSU IRB "Informed Consent Checklist – Basic and Additional Elements." The letter to the research participant included a statement that the study involved research and an explanation of the purpose of the research. The researcher included the expected duration

of the participant's participation and a description of the procedures. The researcher provided the researcher's contact information for the participant's use if further explanation about the research or information concerning the participant's rights was needed.

Included in the letter was "a statement that participation is voluntary, refusal to participate will involve no penalty or loss of benefits to which the participant is otherwise entitled, and the participant may discontinue participation at any time without penalty or loss of benefits, to which the participant is otherwise entitled" (Informed Consent Checklist).

The research involved no more than minimal risk of harm to participants and anonymity through the researcher having no way to link participant to responses on the online survey instrument. Students voluntarily followed the link in the email to the survey instrument and continued the survey. Because of this voluntary action, there was implied consent on the student's part to participate in the survey. The first page of the survey repeated the information from the original letter sent to the student and stated that by continuing the survey, the student implied consent to participate in the research.

Procedures for Data Collection

The researcher adhered to the recommendations for data collection outlined by Dillman (2007). As recommended by O'Sullivan, Rassel, and Bernet (2008), responding to the survey was voluntary, meaning the participants had clear and realistic information on the benefits and risks of participation. In addition, participants could withdraw from the study at anytime.

Using Dillman's (2007) recommendations for methods of survey research, the students' faculty advisors pre-notified their students of the survey by email. The researcher then sent emails on May 14, 2009 introducing the research to all students whose names were provided to the researcher by the AOWC distance education coordinator (Appendix D). Two days after the email introducing the research, on May 16, 2009, the initial email, invitations to the survey with links were sent (Appendix E). Fourteen days after the initial email invitations were sent, May 30, 2009, email reminders were sent to those students who had not yet completed the online survey (Appendix F). The survey closed on June 17, 2009.

Procedures for Data Analysis

At the completion of the survey period, the researcher collected, analyzed and interpreted all responses for answers to the research questions. The researcher analyzed the data to eliminate any "inaccurate, incomplete, or unreasonable data and then improving the quality through correction of detected errors and omissions." (Chapman, 2005, p 1). Analysis for the close-ended Likert scale questions and the ranking questions included frequency ratings and percentages. The researcher used the software Statistical Package for the Social Sciences (SPSS) to analyze the quantitative data.

Coding was the method used to provide a procedure for quantifying the response data from the open-ended question by creating categories. Coding looks for key descriptive words or for patterns in responses. Each response to this survey was assigned at least one category from the coding. The categories were further divided into sub-categories. A descriptive text was written based on responses.

Limitations

The curriculum completed by the non-resident students at the USACGSC varied by course. Because differing curriculum could alter statistical comparisons of the delivery modes, this study limited the comparison of the curriculum delivered. The study identified student preferences for Advanced Distributed Learning course material delivery, instructional methods, and interaction with other students and research. This study was intended for internal use and may not be generalizable. This is a policy study intended to affect distance learning curriculum delivery based on internal USACGSC standards in a field study appropriate for an Educational Doctorate.

Summary

This chapter described the method used to identify student preferences in delivery of the USACGSC distance education curricula to improve student learning. These delivery tools are part of the curriculums of distance education programs provided by the USACGSC. The researcher's experience, as both a student and a member of the staff, helped her develop an interest in distance education and the possibilities that existed in the distance education field, particularly as these possibilities apply to military distance education. The analysis of the survey data provided the information necessary to report findings and recommendations. The recommendations supported an effective online program that is flexible and provides anytime, anywhere delivery.

CHAPTER 4 – Results

Introduction

This research study investigated the preferences for distance education at the United States Army Command and General Staff College. The main research question was: “What are student preferences for the delivery of the USACGSC distance education curriculum?” This chapter reports the results of this research. This chapter contains the following sections:

1. Introduction
2. Purpose of Study
3. Research Questions
4. Demographics
5. Internet and Distance Learning Experience
6. Data Analysis of Likert Scaled Questions
7. Data Analysis of Ranking Questions
8. Data Analysis of Open-Ended Question
9. Comparison of Demographics and Student Preferences
10. Summary

The research findings were useful when the USACGSC rewrote its distance education programs. Insight into student preferences should encourage longitudinal studies to determine if perceptions change as the delivery of distance education changes. One hundred seventy-six eligible students were invited to the online survey. Ninety-one students completed the online survey. Of those ninety-one students, one student response

was not recorded in the database, effectively giving a responses rate of ninety out of one hundred seventy-six. This is a response rate of fifty-one percent. The fifty-one percent response rate was well within Dillman's (2007) recommendation for an appropriate survey response rate.

Purpose of Study

The purpose of this study was to identify current student preferences in order to improve distance education curriculum delivery of the distance education courses of the USACGSC. This study surveyed students in the online AOWC program for their preferences for distance education at the USACGSC.

According to Clark and Mayer (2003), student preferred learning characteristics taken into account when developing distance education courseware provided better learning experiences for students. The resident courses at the USACGSC, using post-instructional conferences (PIC), curriculum delivery reviews (CDR), and surveys of resident students, were tailored to meet the needs of the Army and its students. The resident students of the USACGSC, through surveys conducted by the USACGSC QAO, provided information about their preferences for delivery of the course curricula. However, similar surveys were not conducted of the USACGSC distance learning students. As a result, this study surveyed current AOWC distance education students to determine their preferences for course delivery using a survey instrument design based on Dillman's (2007) recommendations for survey research. This research provided the USACGSC curriculum developers with information to improve the design of the distance

education courses to meet the preferences of students and to improve student learning. By allowing students to provide input to the process, student motivation was maximized.

In this age of rapidly changing contemporary operating environments facing the United States Army, soldiers need up-to-date curriculum. The course delivery needs to be in a timely and flexible package with access from remote locations worldwide.

The Profession of Arms required a flexible military educational system capable of educating military professionals wherever assigned, at any career development level, and for any Army career field. The flexibility and portability of distance education allows military personnel the opportunity to continue their career advancing education, whether stationed within the continental United States or at one of the many worldwide locations of the United States Army.

Like civilian non-resident post-graduate programs, the delivery of non-resident courses at the USACGSC evolved from delivery via correspondence courses, often referred to at the USACGSC as “Box of Books,” to delivery via the Internet. The USACGSC must take student preferences for delivery of material into account to improve student learning. In the past, the USACGSC has provided little to no student interaction in distance education student learning. The program was a student interacting with computer with little or no contact with other humans.

Research Questions

In light of the need for a comprehensive survey of the USACGSC distance education students, the main research question was: “What are student preferences for the

delivery of the USACGSC distance education curriculum?” To answer this research question sub-questions needed to be answered. These sub-questions were:

1. What are student preferences for course material delivery?
2. What are student preferences for instructional methods?
3. What are student preferences for collaboration with other students?
4. What are student preferences for research?

Demographics

One hundred seventy-six eligible students were invited to participate in an online survey to collect data to answer the research question. Ninety students provided responses. The survey asked respondents to provide answers to two demographic questions, which were used to determine if there were any significant demographic factors in student preferences in analysis. This section presents the details of the demographics. The demographic information included:

1. Military service component.
2. Highest education level.

The survey asked students two demographic questions. The survey asked students their highest level of education completed. Of the 90 students who responded, 13 (14.44 percent) students had a bachelor’s degree, 17 (18.89 percent) students had taken courses past the bachelor’s degree level, 46 (51.11 percent) students had master’s degrees, 7 (7.78 percent) students had taken post master’s degree courses, 2 (2.22 percent) students had doctoral degrees, and 5 (5.56 percent) responded “other.” The 3 students answering “other” stated their highest level of education as “JD and MBA,” “post doctoral student

and “currently working on my masters”. All respondents had at least a bachelors degree with the majority working towards or achieved a graduate degree.

Military Service Component

Respondents were asked to identify their military service component (see Table 4). Of the 90 respondents, 40 were active duty (44 percent), 24 were Army Reservists (27 percent), 21 (24 percent) were Army National Guard, 2 (2 percent) were civilians, 3 (3 percent) listed “other,” and one did not answer. The text response to “other” included 1 Active Guard and Reserve, 1 Army Reserve National Guard Active Guard and Reserve and 1 active duty national guard.

Table 4. Military Service Component

Service	Active Duty Army	Army Reserve	Army National Guard	Civilian	Other
Count	40	24	21	2	3
Percent	44	27	24	2	3

A large percentage of respondents were members of one of the Army’s components: the largest percentage were active duty Army. This data indicated there was no significant difference in student preferences between those who were active duty (full-time) army and those in the Reserves and National Guard.

Highest Education Level

Respondents were asked to choose their highest level of education attained (see Table 5). Of the 90 respondents, 14 (16 percent) of the students listed a bachelor’s degree as highest level of education, 18 (20 percent) listed post bachelor’s degree, 46 (51 percent) listed master’s degree, 7 (8 percent) listed post master’s degree courses, 4 listed

doctoral degrees, and 1 listed “other.” The text response to “other” listed a juris doctor degree. The responses indicated 51 (57 percent) of respondent had attained at least graduate level degree. The data indicated a high education level among respondents.

Table 5. Highest Level Education Attained

Highest Educational Level	Count	Percent
Bachelors Degree	14	16
Post Bachelor Degree Courses	18	20
Masters Degree	46	51
Post Masters Degree Courses	7	8
Doctoral Degree	4	4
Other	1	1

Internet and Distance Learning Experience

Distance-Learning Experience

Respondents were asked to choose all the distance-learning experience that applied (see Table 6). Of the 90 respondents, 86 (96 percent) chose online military training, 28 (31 percent) chose independent online classes, 44 (49 percent) chose online college level classes, and 1 chose “other” The one “other” listed an online Certified Flight Instructor Instrumentation (CFII) re-certification course. The data indicated most respondents had at least some other experience with online learning.

Table 6. Distance Learning Experience

Military Training		Independent Online Classes		College Level Classes		Other	
Count	Percent	Count	Percent	Count	Percent	Count	Percent
86	96	28	31	44	49	1	1

Connectivity During CGSC Coursework

Respondents were asked to identify the Internet connectivity they used most often for their online coursework (see Table 7). Of the 90 respondents, 35 (38 percent) chose broadband cable as used most often, 26 (29 percent) chose broadband DSL, 11 (12 percent) chose broadband wireless card, 12 (13 percent) chose office network, 3 (3 percent) chose dialup modem, and 3 (3 percent) chose “other.” Those who chose “other” listed Hogue Barracks, which is broadband; one chose fiber optic services (FIOS), which is a Verizon service; and one chose military satellite. The data indicated the majority of students had access to high speed Internet connections.

Table 7. Internet Connectivity

Connectivity during CGSC coursework.		Broadband Cable	Broadband DSL	Broadband Wireless Card	Office Network	Dialup Modem	Other
Most Internet connectivity	Count	35	26	11	12	3	3
	Percent	38	29	12	13	3	3

Most Frequent Connection

Respondents were asked where they connected most often for their coursework (see Table 8). Of the 90 respondents, 58 (64 percent) chose home, 28 (31 percent) chose work, and 4 (4 percent) chose “other.” Of those that chose “other,” 1 listed WiFi sites, 1 listed while on temporary duty, 1 listed hotel rooms, and 1 listed a classroom. The data indicated most students accessed their coursework at home.

Table 8. Most Frequent Connection for Coursework

Most Frequent Connection	Home	Work	Other
Count	58	28	4
Percent	64	31	4

Frequency of Blog Postings, for Other than Schoolwork

Respondents were asked the frequency with which they post on blogs for other than coursework (see Table 9). Of the 90 respondents, 6 (7 percent) responded they posted to blogs often, 17 (20 percent) responded they occasionally posted on blogs, and 60 (72 percent) responded they never posted on blogs. The data indicated a majority of respondents had not used blogs outside of schoolwork.

Table 9. Frequency of Blog Postings for Other than Schoolwork

Frequency of Blog Postings, for Other Than Schoolwork	Often	Occasionally	Never	No answer
Count	6	17	60	7
Percent	7	20	72	8

Use of Internet

Respondents were asked about their use of the Internet (see Table 10). Respondents were asked to choose all that apply. Of the 90 respondents, 59 (68 percent) used the Internet for schoolwork often and 25 (29 percent) used the Internet occasionally for schoolwork, and 3 (3 percent) never used the Internet for schoolwork. Of the 90 respondents, 80 (93 percent) used the Internet for everyday use often and 4 (5 percent) used the Internet for everyday use occasionally, 2 (2 percent) never used the Internet for everyday use. Of the 90 respondents, 81 (94 percent) used the Internet for work, 4 (5 percent) used the Internet occasionally for work, and 1 (1 percent) never used the Internet for work. Data indicated the majority of respondents used the Internet often for schoolwork, for everyday use, and work.

Table 10. Use of Internet (Choose All That Apply)

Use of Internet		Often	Occasionally	Never
For schoolwork	Count	59	25	3
	Percent	68	29	3
For everyday use	Count	80	4	2
	Percent	93	5	2
For work	Count	81	4	1
	Percent	94	5	1

Reasons for Taking Online Courses

Respondents were asked to choose all that apply concerning why they take online classes (see Table 11). For 62 respondents, they chose to take online courses because online courses fit their schedules. Thirty-eight respondents indicated they liked to work at their own pace. Twenty-one respondents indicated that online courses fit their travel schedules. Eighteen respondents indicated that they liked taking online courses. Sixteen respondents did not answer. Overall, a majority of respondents indicated they took online courses because these courses fit their schedules.

Table 11. Reasons for Taking Online Courses

Reasons for Taking Online Courses – Choose All That Apply	Count	%
Fits work schedule	62	10.32
Like working at own pace	38	40.00
Fits travel schedule	21	13.55
Likes working online	18	11.61
(Not Answered)	16	10.32

Data Analysis of Closed-Ended Questions

The analysis of the data from the research was used to answer the research question and the sub-questions. The data were analyzed using the USACGSC QAO standard. The standard of 66 percent favorable responses is a filter to determine whether the responses met the criteria. A policy (see Appendix C) approved in 1985 by the

USACGSC Deputy Commandant, set the standard for the USACGSC research (Bitters, 2000).

The Likert scale responses *strongly agree (SA)* and *agree (A)* totaled are the USACGSC standard for favorable response. In this data analysis, with a plus or minus 7 percent margin of error, anything below 59 percent did not meet the USACGSC standard for favorable responses. Anything above 73 percent did meet the USACGSC standard for favorable responses. Anything between 59 percent and 73 percent cannot be determined.

Delivery of Course Material

The data in this section covered the research sub-question: “What are student preferences for course material delivery?”

Respondents were given a Likert scale using the continuum *strongly disagree, disagree, neutral, agree, strongly agree* to express their preference for delivery of Course Material. The responses were analyzed using the USACGSC standard of 66 percent favorable response with a plus or minus margin of error of 7 percent (see Table 12).

Concerning student preferences for delivery of course material, three delivery methods for curriculum material had percentages greater than 73 percent for favorable response rates for student preferences: reading course material in print, conducting research online, and submitting written assignments online as effective for learning. These three categories received a favorable where it cannot be determined met or not met.

Table 12. Likert Scale Responses for Delivery of Course Material

Question	Strongly Disagree %/count	Disagree %/count	Neutral %/count	Standard	Total Favorable %/count	Agree %/count	Strongly Agree %/count
I find reading course material online effective for my learning	7/6	20/18	26/23	Did Not Meet	48/43	40/36	8/7
I find reading course material in print effective for my learning	0/0	1/1	7/3	Met	93/46	46/23	47/23
I find submitting my written tests by mail effective for my learning	20/18	33/30	31/28	Did Not Meet	15/14	14/13	1/1
I find submitting my written tests by email effective for my learning	2/2	4/4	24/22	Cannot Say	69/62	56/50	13/12
I find submitting my written tests online effective for my learning	3/3	4/4	18/16	Met	75/67	47/42	28/25
I find submitting my written assignments by mail effective for my learning	21/19	29/26	34/31	Did Not Meet	15/14	13/12	2/2
I find submitting my written assignments by email effective for my learning	3/3	3/3	25/22	Cannot Say	69/61	53/47	16/14
I find submitting my written assignments online effective for my learning	3/3	7/6	19/17	Cannot Say	17/63	47/42	24/21
I find going to a library to conduct research effective for my learning	4/4	20/18	26/23	Did Not Meet	49	39/35	10/9
I find to use the Combined Arms Research Library (CARL) online to conduct research effective for my learning	6/5	6/5	36/32	Did Not Meet	53/47	44/39	9/8
I find using other online resources to conduct research effective for my learning	3/3	5/5	6	Met	89/80	59/54	30/26

Instructional Delivery

The data in this section covered the sub-question: What are student preferences for instructional methods?

Respondents were given a Likert scale using the continuum of terms: *strongly disagree, disagree, neutral, agree, and strongly agree* to express their preference for delivery of Instruction. The responses were analyzed using the USACGSC standard of 66 percent favorable response with a plus or minus margin of error of 7 percent (see Table 13).

Concerning student preferences for delivery of Instruction, one instructional delivery had percentages greater than 73 percent for favorable response rates for student preferences. The data indicated there were significant favorable responses for face-to face contact with instructors.

Table 13. Likert Scale Responses for Instructional Delivery

Question	Strongly Disagree %/count	Disagree %/count	Neutral %/count	Standard	Total Favorable %/count	Agree %/count	Strongly Agree %/count
I find learning online without facilitation from an instructor effective for learning.	19/17	31/28	19/17	Did Not Meet	31/28	27/24	4/4
I find having contact from an instructor by email effective for learning.	1/1	13/12	24/21	Cannot Say	62/55	55/49	7/6
I find having contact from an instructor using telephone effective for learning.	2/2	6/5	34/31	Did Not Meet	58/52	52/47	6/5
I find having contact from an instructor using online real-time methods, such as voice over the Internet, effective for learning.	2/2	9/8	22	Cannot Say	66/60	52/47	14/13
I find having face-to-face contact with an instructor effective for learning.	0/0	3/3	2/2	Met	94/85	21/19	73/60

Collaboration with Other Students

The data in this section covered the research sub-question: What are student preferences for collaboration with other students?

Respondents were given a Likert scale using the continuum *strongly disagree*, *disagree*, *neutral*, *agree*, *strongly agree* to express their preference for collaboration with other students. The responses were analyzed using the USACGSC standard of 66 percent favorable response with a plus or minus margin of error of 7 percent (see Table 14).

Concerning student preferences for collaboration with other students, no preferences for collaboration obtained a favorable greater than 73 percent. The data indicated there were no significant favorable responses for collaboration with other students. Only one collaboration category for preferences received favorable responses

within the margin to neither be able to say met or not met. This preference was Voice over the Internet for collaboration.

Table 14. Likert Scale Responses for Collaboration with Other Students

Question	Strongly Disagree %/count	Disagree %/count	Neutral %/count	Standard	Total Favorable %/count	Agree %/count	Strongly Agree %/count
I find using online chat rooms effective for learning	11/10	11/10	31/28	Did Not Meet	47/42	39/35	8/7
I find using an online message board effective for learning	9/8	12/11	29/26	Did Not Meet	49/44	36/32	13/12
I find using email effective for learning	2/2	9/8	32/29	Did Not Meet	56/51	44/40	12/11
I find having no contact with other students effective for learning	29/26	38/34	17/15	Did Not Meet	16/15	12/11	4/48
I find real-time methods of interaction, such as voice Over the Internet (VOI), effective for learning	6/5	10/9	21/19	Cannot Say	63/57	39/35	24/22

Research Preferences

The data in this section covered the research sub-question: What are student preferences for research?

Respondents were given a Likert scale using the continuum of terms *strongly disagree, disagree, neutral, agree, strongly agree* to express their preference for collaboration with other students. The responses were analyzed using the USACGSC standard of 66 percent favorable response with a plus or minus margin of error of 7 percent (see Table 15).

Concerning student preferences for research, one preference for research obtained a favorable greater than 73 percent. The data indicated students prefer research online.

One research category for preferences received a favorable within the margin to be able to say neither met nor not met. This preference was CARL online.

Table 15. Likert Scale Responses for Research Preferences

Question	Strongly Disagree %/count	Disagree %/count	Neutral %/count	Standard	Total Favorable %/count	Agree %/count	Strongly Agree %/count
I find going to a library to conduct research effective for my learning.	4/4	20/18	26/23	Did Not Meet	49/44	39/35	109
I find to use the Combined Arms Research Library (CARL) online to conduct research effective for my learning.	6/5	6/5	36/32	Did Not Meet	53/47	44/39	9/8
I find using other online resources to conduct research effective for my learning.	0/0	3/3	6/5	Met	88/80	59/54	29/26

Data Analysis of Ranking Questions

Respondents were asked to rank their preferences for different distance learning deliveries. The different categories for delivery were ranked according to the mean. Students were asked to rank the items with 1 being the highest rank and 5 being the lowest rank. The data were analyzed using Spearman Rank Correlation Coefficient. The Spearman Rank Correlation Coefficient (Spearman’s rho) used ordinal data, as in the case of ranking. Using the formula for Spearman’s rho, student preferences were ranked 1 through 5.

Ranking of Course Delivery Preferences

The data in this section covered the research sub-question: What are student preferences for course delivery?

Using Spearman's rho, student preferences for reading was ranked 1 and 2. Respondents ranked reading course material in print first. Reading course material online was ranked second (see Table 16).

Table 16. Ranking of Reading Preferences

	Mean Rank	Rank Order
Read course material in print	1.20	1
Read course material online	1.80	2

Using Spearman's rho, student preferences for test submission was ranked 1 through 3. Respondents ranked submitting written tests online first. Submitting written tests by email was ranked second. Submitting written tests by mail ranked third (see Table 17).

Table 17. Ranking of Test Preferences

	Mean Rank	Rank Order
Submitting written tests online	1.50	1
Submitting written tests by email	1.63	2
Submitting written tests by mail	2.88	3

Using Spearman's rho, student preferences for written assignment submission was ranked 1 through 3. Respondents ranked submitting written assignments online first. Submitting written assignment by email was ranked second. Submitting written assignments by mail ranked third (see Table 18).

Table 18. Ranking of Assignment Submission Preferences

	Mean Rank	Rank Order
Submitting written assignments online	1.49	1
Submitting written assignments by email	1.60	2
Submitting written assignments by mail	2.91	3

Ranking of Instructor Contact Preferences

The data in this section covered the research sub-question: What are student preferences for instructor contact?

Using Spearman's rho, student preferences for contact with instructors was ranked 1 through 5. When asked to rank five instructor contact preferences, respondents' ranked face-to-face contact with instructors ranked number first. Contact with the instructor by telephone was ranked second. Contact with the instructor by email was ranked third. Contact with the instructor by Voiceover the Internet was ranked fourth. No facilitation by an instructor was ranked fifth. Data indicated respondents preferred face-to-face instructor facilitation (see Table 19).

Table 19. Ranking of Instructor Contact Preferences

Ranking of instructor contact preferences	Mean Rank	Rank Order
Contact with an instructor face-to-face	1.33	1
Contact with an instructor via telephone	3.13	2
Contact with an instructor via email	3.23	3
Contact with an instructor with Voice Over the Internet (VOI)	3.24	4
Learning online without facilitation by an instructor	4.07	5

Ranking of Student Collaboration Preferences

The data in this section covered the research sub-question: What are student preferences for collaboration with other students?

Using Spearman’s rho, student preferences for interaction with other students were ranked 1 through 5. When asked to rank five student interactions, respondents ranked interacting with other students using Voice over the Internet as first. Student interaction with other students using email was ranked second. Student interaction with other students by online chat rooms was ranked third. Student interaction with other students using online message boards was ranked fourth. No student interaction with other students was ranked fifth (see Table 20).

Table 20. Ranking of Student Collaboration Preferences

Ranking of Student Interaction Preferences	Mean Rank	Rank Order
Interaction with other students using Voice Over the Internet or Video Conferencing	2.39	1
Interaction with other students using email	2.59	2
Interaction with other students using online chat rooms	2.75	3
Interaction with other students using online message boards	2.79	4
No interaction with other students	4.48	5

Ranking of Research Preferences

The data in this section covered the research sub-question: What are student preferences for research?

Using Spearman’s rho, student preferences for interaction with other students were ranked 1 through 3. When asked to rank three research methods, respondents ranked conducting research using other online resources as first. Conducting research using CARL online was ranked second. Conducting research at a library was ranked third. (see Table 21).

Table 21. Ranking of Research Preferences

	Mean Rank	Rank Order
Conducting Research using other online resources	1.53	1
Conducting research via the Combined Arms Research Library (CARL) online	2.07	2
Conducting research at a library	2.40	3

Data Analysis of Open-Ended Question

The researcher analyzed the responses to the open-ended question and trended the open-ended comments. Based on the recommendations of the USACGSC statistician, the data for the open-ended questions was analyzed using the salient/trend analysis method used at the USACGSC to quantify the responses. Fifty-four of the ninety students responding to the survey provided comments to the open-ended question: “From your experience with other online programs, what other strategies would you like to see used in the distance education program at the Command and General Staff College”? Four student responses indicated either “not applicable” or no prior online experience. These four responses were removed from the analysis. The open-ended responses are at Appendix I.

This method for data analysis of open-ended questions was explained in Chapter 3 and was based on the USACGSC policy for open-ended response data analysis. The researcher grouped student comments into categories that emerged. Twenty-one

categories emerged from the student responses. The categories were further grouped into salient categories and trend categories. Salient categories were defined by the researcher as those categories with student responses equal to 5 percent but less than 10 percent of students responding to the open-ended question. Trend categories were defined by the researcher as those categories with student responses constituting 10 percent or more of students responding contributed comments to the category. Table 22 provides counts and percentages for comments to the categories. In the analysis, seven salient categories emerged and four of the salient categories emerged as trend categories..

From the student comments to the open-ended question, a trend emerged against Online or ADL courses. Of the fifty students providing comments, twenty-one students (42 percent) commented on Online or ADL courses. Four students had positive comments while seventeen had negative comments. Overwhelmingly, the students commenting on Online or ADL course had negative opinions. Negative comments included, “I only take on-line courses because they are required. I do not benefit from on-line courses.” The negative comments reflected a frustration of students forced to take online courses rather than classroom course. The positive comments included, “I received my master’s degree while taking some online courses, CGSC is on par with their peers.”

From the student comments to the open-ended question, a trend emerged for Face-to-Face, either all or partial in-residence. Of the fifty students providing comments, eighteen students (36 percent) commented on Face-to-Face, either all or partial in-residence. Eighteen students recommended Face-to-Face, either all or partial in-residence. Overwhelmingly, those students commenting on Face-to-Face delivery were of the opinion that at least all or part of the course should be in a classroom setting or in-

residence. The comments included, “I need to be side-by-side my group members interacting face-to-face with my instructor” and “There needs to be a culminating exercise with everyone at Ft Leavenworth.”

From the student comments, a trend emerged for schedules or synchronous delivery. Of the fifty students providing comments, eleven students (21 percent) commented on schedules or synchronous delivery. Eleven students had negative comments. Overwhelmingly, the students commenting on the schedules or synchronous delivery had negative opinions. Student comments included, “For AOWC make the entire thing independent--trying to link up with people all over the world once a week via the internet I think will be a nightmare” and “Being West Coast and now in Iraq, it is often difficult to meet the times that other students got together.”

From the student comments, a trend emerged for Voice over Internet or Video Conferencing. Of the fifty students providing comments, five students (10 percent) commented on Voice over Internet or Video Conferencing. One student had a positive comment and four students had negative comments. Overwhelmingly, the students commenting on Voice over Internet or Video Conferencing had negative opinions. One of the student comments reflects the sentiment expressed by the other negative comments, “The weekly VOI is a waste of time--the information has done nothing to amplify the course work.” The one positive comment was “Video conferencing; I am looking forward to using it in my AOWC class!”

From the student comments, a salient category emerged for Instant Messaging (IM) or Internet Chat. Of the fifty students providing comments, four students (8 percent)

commented on Instant Messaging/Internet Chat. Of the fifty students providing comments, four recommended the use of Instant Messaging or Internet Chat.

From the student comments, a salient category emerged for connectivity. Of the fifty students providing comments, three students (6 percent) commented on connectivity. Of the three students providing comments, three had negative comments.

From the student comments, a salient category emerged for collaboration online. Of the fifty students providing comments, three students (6 percent) commented on collaboration online. Of the three students providing comment, one student recommended collaboration online, while two students had negative comments (see Table 22).

Table 22. Analysis of Comments to Open-ended Question

Category	Positive Comments	Negative Comments	Total Number of Comments in this Category	Total Percent of Comments in this Category	Total Number of Respondents
Online/ADL Courses	4	17	21	42	50
Face-to-Face All or Partial	18	0	18	18	50
Schedules /Synchronous Delivery	0	11	11	22	50
Voice Over Internet or Video Conferencing	1	4	5	10	50
IM/Chat	4	0	4	8	50
Connectivity	0	3	3	6	50
Collaboration Online	1	2	3	6	50
Curriculum	0	2	2	4	50
Facilitation	2	0	2	4	50
Share Completed Work	2	0	2	4	50
Tele Conference	2	0	2	4	50
Group Work Online	0	2	2	4	50
Issue Laptops	1	0	1	2	50
Video Conference	1	0	1	2	50
WebTyco	1	0	1	2	50
Email Assignments	1	0	1	2	50
Cost	0	1	1	2	50
Flexible Schedule	1	0	1	2	50
Staff Groups by Location	1	0	1	2	50
Course Content on CD	1	0	1	2	50
Print Material Issued	1	0	1	2	50

Trended Categories 10 % of student responses
 Salient Categories 5 % of student responses
 The number in bold indicates the high number for the category. Positive comments and recommendation were counted as positive comments. Negative comments and recommendation were counted as negative responses.

Summary

Demographically the respondents to this online survey were mostly Active Duty Army. The majority of the respondents had at least a master's degree. Ninety-six percent of the respondents had military distance learning experience and almost half had college-level distance learning experience. Only three percent of the respondents predominantly used the slower dialup modem connections. Almost two-thirds of respondents did most of their ILE-CC class work from home. Over two-thirds of the respondents did not post to blogs for other than schoolwork, where blogging is required. Most of the respondents used the Internet on a regular basis, especially for work and for their own use. Respondents chose Online Courses mostly because it fits their work schedules. The data indicated that student choices on the survey were based on highly educated opinion, on faster Internet connections, and on vast experience with the Internet.

The students responding to the open-ended question had more negative comments (17 negative to 4 positive) about online courses. They also had more positive comments about Face-to-Face interaction, with zero negative comments and 18 positive comments.

The data were analyzed to answer the research question "What are student preferences for the delivery of the USACGSC distance education curriculum?" by answering four sub-questions. Respondents for the sub-question "What are student preferences for course material delivery?" indicated they preferred learning in a classroom environment, with On-the-Job training second. Respondents also preferred reading course material in print. Student responses indicated, regarding sub-question "What are student preferences for instructional methods," that a preference for facilitation by instructors for coursework. This interaction included contact with instructors and other

students. Student responses indicated, regarding sub-question “What are student preferences for collaboration with other students,” that they preferred collaborating with other students rather than no contact with other students. Student responses indicated, regarding sub-question “What are student preferences for research,” that they preferred research Online, rather than physically going to a library.

CHAPTER 5 - Findings and Recommendations

Introduction

Since the year 1909, distance learning has been one of the USACGSC curriculum delivery modes. In the last decade, the USACGSC distance education program has exploded in both the number of students enrolled and the number of courses available. Based on the large number of students enrolled in distance education programs at the USACGSC, this study was intended to add to the present research regarding the students the USACGSC preferences for distance education. Constructivist educational theory emphasized that student-driven education positively affects student learning (Diaz, 2000). Accommodating student preferences as identified through this study should result in enhanced student learning.

This chapter contains the following discussions:

1. Introduction
2. Purpose of Study
3. Significance of the Study
4. Research Questions
5. Key Findings
6. Recommendations
7. Implications and
8. Future Research Possibilities
9. Conclusion.

Purpose of Study

The purpose of this study was to identify current student preferences in order to improve distance education curriculum delivery of the distance education curriculum of the USACGSC. This study offered analysis from the students' viewpoints of the three non-resident (distance education) modalities of the USACGSC.

According to Clark and Mayer (2003), student preferred learning characteristics taken into account when developing distance education courseware provided a better learning experience for students. The resident courses at the USACGSC, using post-instructional conferences (PIC), curriculum delivery reviews (CDR), and surveys of resident students, were tailored to meet the needs of the Army and its students. The resident students of the USACGSC, through surveys conducted by the USACGSC Quality Assurance Office (QAO), provided information about their preferences for delivery of the course curricula. However, similar surveys were not conducted of the USACGSC distance-learning students. This study surveyed current distance-education students to determine their preferences for course delivery using a survey instrument designed based on Dillman's (2007) recommendations for survey research. This research provided the USACGSC curriculum developers with information to better design the distance education courses to meet the preferences of students and, it is hoped, to improve student learning. By allowing students to provide input to the process, there was likelihood for improved student learning.

In this age of rapidly changing contemporary operating environments facing the United States Army, soldiers need up-to-date curriculum in a timely and flexible package

with access from remote locations worldwide. In addition, there are components of distance education built into the USACGSC Resident and Reserve School programs.

The Profession of Arms required a flexible military educational system capable of educating military professionals wherever assigned, at any career development level, and for any Army career field. The flexibility and portability of distance education allowed military personnel the opportunity to continue their career advancing education, whether stationed within the continental United States or at one of the many worldwide locations of the United States Army.

Like civilian non-resident post-graduate programs, the delivery of non-resident courses at the USACGSC evolved from delivery via correspondence courses, often referred to at the USACGSC as “Box of Books,” to delivery via the Internet. The USACGSC must take student preferences for delivery of material into account to improve student learning. In the past, the USACGSC has provided little to no student involvement in distance education student learning.

Significance of the Study

Professional military education required the Army to provide a variety of professional military education (PME) programs. Advanced Operations and Warfighting Course (AOWC) by distance-learning program was the only delivery method for students other than those in residence. This increased the number of the USACGSC students receiving distance-learning courses. This increase in distance-learning student population increased the need for a comprehensive study of distance education student preferences to improve student learning.

The results of this study are available to the Commandant of the USACGSC, with recommendations for improving distance education curriculum based on the findings. The USACGSC Commandant was responsible for all decisions on curriculum and delivery. Based on the findings and recommendations, the USACGSC curriculum developers and online course administrators used the findings to improve student learning in a delivery mode providing more effective anytime, anywhere, and flexible courses for students located throughout the world.

Because military students, like other professionals, are motivated to continue their education using a variety of online options to further their careers, this study also may have significance for the general population.

Research Questions

In light of the need for a comprehensive survey of the USACGSC distance education students, the main research question was: “What are student preferences for the delivery of the USACGSC distance education curriculum?” Four sub-questions were used to answer the research question.

1. What are student preferences for course material delivery? Students preferred reading material in print. Students preferred submitting assignments online.

2. What are student preferences for instructional methods? Students preferred face-to-face contact with instructors. For online course options student preferred three other methods: contact with instructors by email, telephone or Voice Over the Internet.

3. What are student preferences for collaboration with other students? Students preferred Voice Over the Internet collaboration with other students.

4. What are student preferences for research? Students preferred Online research.

In light of the answers to the sub-questions, the answer to the research question “What are student preferences for the delivery of the USACGSC distance education curriculum?” students preferred flexible, anytime and anywhere online education. Flexible in order to fit busy schedules. Anytime and anywhere in order to fit time zones in locations around the world.

Key Findings

The data analysis of the survey research sub-questions answered the research question: “What are student preferences for the delivery of the USACGSC distance education curriculum?”

The first sub-question was “What are student preferences for course material delivery?” The course material deliveries addressed were delivery of reading material, submitting written tests, submitting written assignments, and type of courses student preferred. These were the delivery modes available to students.

The groups preferred reading course material in print rather than on the computer. This puts the cost of printing on the school or on students.

Students preferred submitting written tests online rather than submit written tests by mail. The second rated preference, submitting tests by email, far exceeded submitting tests by mail.

Students preferred submitting written assignments online rather than submit written assignments by mail. The second ranked preference, submitting assignments by email, far exceeded submitting assignments by mail.

Students were asked to rank their preferences for course delivery. Students expressed a preference for in-class learning, with on-the-job training second, Online classes third, video classes fourth, and last correspondence course through the mail. Respondents preferred face-to-face contact with others. In addition, based on comments to the open-ended questions, respondents preferred in-class, because they want to concentrate on school away from distractions. According to one respondent, “I need to be on orders, sequestered away from every other demand and I need to be with my group members interacting face-to-face with my instructor.”

The second sub-question was “What are student preferences for instructional methods?” According to data analysis, students preferred face-to-face contact with the instructor. There was no significant difference from respondents based on educational level nor component. Based on comments from the open-ended question, this face-to-face could be an initial face-to-face with the instructor or face-to-face during portions of the course. The least preferred interaction was no interaction at all. This preference coincided with the student preference for in-class learning

The third sub-question was: What are student preferences for collaboration with other students? Students preferred using Voice Over the Internet (VOI) to collaborate with other students. The least preferred was no collaboration with other students. According to research included in the literature review, students learned from each other. Neither educational level nor component made a significant difference in the ranking. Without collaboration, the adult learning theory of students learning more from each other than from instructors was ignored.

The fourth research sub-question was “What are student preferences for research?” Analysis showed no significant difference in student preferences based on either educational level or component. Students preferred using Online resources other than CARL, with using CARL Online ranked second. Going to a physical library ranked last.

In total, the data analysis for the research sub-questions, answered the research question: What are student preferences for the delivery of the USACGSC distance education curriculum? Students preferred a physical location for learning. In the distance learning the USACGSC realm, this physical location was provided by the Army Reserve Schools in locations worldwide. Respondents also preferred reading course material in print. This printed material was provided by the school or printed out by the student. If not provided in print by the school, the reading material should be printable. Respondents preferred face-to-face contact with the instructor. Where it was not possible for face-to-face contact, instructors should be available to answer student questions and to provide feedback to students. Respondents preferred collaboration with other students. This preference was in the form of synchronous connections. Respondents preferred to do coursework research Online. Whether this was because of busy schedules, student locations, or just students being more comfortable with accessing information Online, students preferred not to use a physical library.

Responses to the open-ended question and the closed-ended questions supported information contained in the literature review. Respondents preferred not having synchronous delivery of course material due to scheduling difficulties. The advantage of Online courses was flexibility. There was relatively little flexibility in resident classroom

schedules, but with distance education, “. . . programs today do not require that students meet at the same time. Such programs allow virtually ‘anytime, anyplace learning.’ This is true of courses delivered over the Internet” (Barker, 2000, p. 88). According to one response, “a set schedule should not be used for the AOWC distance learning program. The set schedule established by the AOWC facilitator restricts the flexibility of fitting an online course into an Army officer’s work schedule” (Appendix I, response 10). A second response also appears to favor asynchronous over synchronous, “For AOWC make the entire thing independent – trying to link up with people all over the world once a week via the internet I think will be a nightmare” (Appendix I, response 18).

This and other responses also supported research by Mangan (2001) that distance learning is readily available to students. It is available through such means as computers, television, and telephone. Education that is accessible at a time, place, location, and pace that is convenient to the user. According to one respondent, “I would like to see AOWC taught all online at my own pace like the common core or via the classroom with the TASS BNs with face to face facilitation” (Appendix I, response 24).

Many students favor the flexibility and anytime, anywhere characteristics of distance education over resident schools. “Taking the course on the Internet allows students greater flexibility and access to coursework, which for some students was a higher priority than face-to-face interactions they have experienced in an on-campus course” (Card & Horton, 2000, p. 235). Data indicated that respondents preferred delivery of the course with as much flexibility as possible, completing the course at each student’s own rate. One response reflected a preference towards flexible schedules, “Often students are in distant places and have disruptive schedules. Courses should be

segmented into all individual and then group work” (Appendix I, response 9). Tying students to the course schedule defeated the flexibility of Online courses.

Student responses indicated a preference for face-to-face interaction with instructors. Online distance education fit somewhere between the face-to-face classes that provided interaction with an instructor and correspondence courses to little opportunity for students and instructors to interact (Schwartzman & Tuttle, 2002). One respondent stated, “I’m forced to take AOWC on-line. For all practical purposes, no other option is available—I’ve asked several times and that has been the consistent response” (Appendix I, response 15). This and other responses reflected a desire for a resident course. The closer the online course replicated the resident course, the closer to face-to-face the course became.

Respondents preferred interaction but not at the cost of flexibility. Interaction built into online courses was critical for effective course delivery and increased student success. Peterson stressed interactivity in curriculum delivery (2004). One respondent stated, “Video-conferencing; I am looking forward to using it in my AOWC class!” (Appendix I, response 14). This student looked forward to interactivity. However another student objected to interactivity because it interfered with flexibility. One student response suggested this need for flexibility, “distance learning online is great, the AOWC course is well put together with one exception trying to synchronize the activities of 14 students doing MDMP is not worth it. All deliverables should be the students work alone“ (Appendix I, response 30).

The learning community allowed members to benefit from other students’ knowledge. “These virtual communities emerge in cyberspace whenever a group of

learners in different locations carries on public discussions with sufficient human interaction to form learning relationships” (Barker, 2000, p. 88). Students in an online environment can rely on each other and can work together. “Using the Web, teachers and students can more easily form learning communities extending far beyond the classroom” (Barker, 2000, p. 88). Students in this study preferred collaboration with other students. One student stated, “more chatroom discussion between students” (Appendix I, response 35).

In a study of distance education by Card and Horton, students provided their perceptions of group learning. According to the authors (2000), students “perceived that the cooperative learning groups helped them to learn the material, to be accountable and responsible for doing the reading, and to seek to understand other students’ opinions” (2000, p. 235). Respondents indicated they preferred receiving information from other students. One respondent stated, “when I was working on my masters, the posting was very effective in the learning process. When everyone was respectful in critiquing the comments it made learning better” (Appendix I, response 3).

“ The largely asynchronous delivery mode of the course provided freedom and flexibility in dealing with the constraints of resources such as time, space, money, and personal and family relationships” (Barab, Thomas, & Merrill, 2001, p. 105). Student responses indicated the students preferred face-to-face course delivery, but when given only a choice of synchronous or asynchronous course delivery, they preferred asynchronous due to schedules and technology issues. One student provided insight by stating, “Options for doing this course without being tied to others. Being West Coast and

now in Iraq, it is often difficult to meet the times that other students got together” (Appendix I, response 41).

Asynchronous delivery allowed students from many time zones to participate as a class or a learning community. “Not surprisingly, time-insensitive distance learning via the Internet is growing much more rapidly as an educational delivery medium than such time-sensitive delivery systems as satellite, fiber optic, cable, or other TV-based networks” (Barker, 2000, p. 88). One student responded

The requirement for certain time/date online coordination with instructors and other students is a very negative attribute of the DL program. While it should be available as an add-on resource, on-line conferences and sessions tied to date-time groups are counterproductive to the end state of education via flexible schedules (Appendix I, response 42).

Some students preferred some synchronous delivery. With synchronous delivery, the class met at a predetermined time on the Internet.

One form of distance education that has benefited from recent technological developments has been interactive distance education. In this form of distance education the teacher and students, although physically separated, can see and hear each other through two-way audio and video communications thus providing a real-time teaching/learning environment (Carter, 2001, p. 249).

Students preferred Voice Over Internet as a method for collaboration with other students.

A study of distance education students by Schwartzman and Tuttle, 2002, underscored the ability of distance education programs to be superior to resident programs. Students had access to instructor-generated notes, course videos on demand,

and any PowerPoint presentations provided by the instructors. Some students preferred material in the form of print and CDs. Students preferred reading material in print. According to one respondent, “sending course material and video classes to students via CD. The videos do not work when internet is limited” (Appendix I, response 9).

Charlotte Danielson (1996) emphasized that, in a community of learners, students not only decide what is taught, but also how it is taught. Knowing student preferences helps with the development of Online courses. This provides students the opportunity to let schools know what they want and need to know. Creating the right mix for a community is essential. In one student’s opinion, “every effort should be made to build staff groups by location, which provides flexibility for students to meet face to face to complete coursework” (Appendix I, response 32).

Using information indicating student preferences is a method for improving student learning (Marzano, 2003). The findings of this study provided a method for the USACGSC obtain information for improving student learning.

Implications

This research answered the question “What are student preferences for the delivery of the USACGSC distance education curriculum?” To answer this research question sub-questions needed to be answered. These sub-questions were:

1. What are student preferences for course material delivery?
2. What are student preferences for instructional methods?
3. What are student preferences for collaboration with other students?
4. What are student preferences for research?

When it came to the delivery of course materials, students preferred learning in a classroom environment, with On-the-Job training second. Based on comments by students, some students expressed dissatisfaction with being forced into Online learning. If students felt some control over their learning experience, they may not have had such a negative reaction to Online education. Students also preferred reading course material in print. As students become more comfortable with reading material Online and using the Internet for higher education, will student preferences for Online learning change?

Student preferences indicated a need for human contact for coursework. This interaction included contact with instructors and other students. Problems occurred with Online synchronous communications when bandwidth was limited, when there were time differentials between students and instructors, and when there was something degrading the student's ability to having necessary access to synchronous communication capable computers.

Respondents in this study preferred collaborating with other students rather than having no contact with other students. For online purposes, students preferred Voice Over the Internet. This may require online students to be issued synchronous ready computers for the duration of the course. Otherwise, the financial burden of technology ready to facilitate student learning is transferred to students. When it comes to research preferences, students preferred researching online. CARL also has many online research tools.

Future Research Possibilities

The data in this study indicated respondents preferred reading material in print, downloadable or available on CD, and at least some face-to-face contact with instructors. This suggests a longitudinal study of student preferences for online learning in general.

As students become more comfortable with technology, it is likely that they will be more satisfied with online learning tools and the networking possibilities. It is also possible that graduates of the online program may be interested in serving as mentors, and this could also be a research topic.

When it comes to research preferences, students preferred researching online. CARL also has many online research tools. For future research possibilities: how can CARL help students become more aware of the tools on CARL online? How can CARL help students become more familiar with its online tools?

Another future research possibility is a study of effective synchronous communications to find solutions to any barriers to using synchronous methods to facilitate student and faculty interaction. The data in this study indicated respondents preferred communicating with faculty and other students in other than a synchronous delivery.

Recommendations

Based on the data, including analysis of the survey results, the literature review and the researcher's personal experience with the USACGSC distance learning program, the following are recommended:

1. Make a portion of the USACGSC advanced distributed learning courses face-to-face, whether in small groups or in one location. The instructor could communicate via video teleconferencing or using an online synchronous method. The results of closed-ended questions indicated respondents preferred in class courses. Respondents commented, in the open-ended questions, that they preferred some face-to-face time with instructors and other students. (See Appendix I).

2. Make all course material downloadable or issue course material in print and CD. This includes readings and videos. Some locations have small bandwidth or block streaming video. In the results of closed-ended questions, respondents preferred reading in printed form. Respondents commented, in the open-ended questions, that they preferred course material issued in print form and on CDs to augment the material available online. (See Appendix I).

3. Coursework could be made self-paced. Student cohorts could be created for course practical exercises. In the results of closed-ended questions, respondents preferred working at their own pace. Respondents commented, in the open-ended questions, that they preferred flexible schedules. (See Appendix I).

4. Make faculty available to all online students. Assign a primary faculty member and alternate faculty members. In the results of closed-ended questions, respondents preferred facilitation. Respondents commented, in the open-ended questions, that they preferred instructor contact. (See Appendix I).

Research indicates that students learn more effectively when the course is student centered. According to constructivist educational theory, an emphasis on student-driven education positively affects student learning (Diaz, 2000). Accordingly, accommodating

student preferences as identified through this study should result in enhanced student learning.

Conclusion

The data in this study indicated student preferences in the delivery of online USACGSC courses. The analysis of the survey data provided the information necessary to report findings and recommendations. The findings concluded that a majority of respondents preferred the ability to read course material in print. Based on this study, the recommendation is to make all course material downloadable and printable or distribute course material in print and on CDs.

Respondents preferred facilitation by instructors. This facilitation does not necessarily need to be synchronous; however, instructors need to be available when students are available. The USACGSC distance learning students are stationed worldwide, making it difficult for instructors to be tied to the daytime work schedule of the resident school. A recommendation is to assign staff groups to instructors by time zones. Some instructors may need to work late nights instead of being tied to the central time zone class schedule.

The recommendations, based on student preferences, supported an effective online program that is flexible and provides anytime, anywhere delivery. Many students responded to the open-ended question that they only take online courses because there is no other choice. Students overwhelmingly answered the question “Why do you take online courses? With “it fits my work schedule.” An improvement in the delivery of the

courses with an emphasis on making the course flexible and available anytime anywhere would make this method of delivery more attractive to students.

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Appendix A - Kansas State University Institutional Review Board



University Research
Compliance Office
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TO: Teresa Miller
Educational Leadership
318 Bluemont

Proposal Number: 5041

FROM: Rick Scheidt, Chair 
Committee on Research Involving Human Subjects

DATE: April 24, 2009

RE: Proposal Entitled, "Study of Student Preferences for the Delivery of Reading Material, Instructional Methodology, and Interaction Between Students of the Distance Education Program at the United States Army Command and General Staff College"

The Committee on Research Involving Human Subjects / Institutional Review Board (IRB) for Kansas State University has reviewed the proposal identified above and has determined that it is EXEMPT from further IRB review. This exemption applies only to the proposal - as written - and currently on file with the IRB. Any change potentially affecting human subjects must be approved by the IRB prior to implementation and may disqualify the proposal from exemption.

Based upon information provided to the IRB, this activity is exempt under the criteria set forth in the Federal Policy for the Protection of Human Subjects, **45 CFR §46.101, paragraph b, category: 2, subsection: i.**

Certain research is exempt from the requirements of HHS/OHRP regulations. A determination that research is exempt does not imply that investigators have no ethical responsibilities to subjects in such research; it means only that the regulatory requirements related to IRB review, informed consent, and assurance of compliance do not apply to the research.

Any unanticipated problems involving risk to subjects or to others must be reported immediately to the Chair of the Committee on Research Involving Human Subjects, the University Research Compliance Office, and if the subjects are KSU students, to the Director of the Student Health Center.

Appendix B - Command and General Staff College IRB Approval

ATZL-SWA-QA

16 March 2009

MEMORANDUM FOR RECORD

SUBJECT: Approval to conduct survey research at the United States Army Command and General

1. In accordance with the requirements of CGSC Bulletin No. 40, Survey Research, approval has been granted for Dawn M. Weston to conduct survey research at the Command and General Staff College.
2. The Command and General Staff College assigns the survey titled “Study of Student Perceived Effectiveness for the Delivery of Distance Education Instruction at the United States Army Command and General Staff College” control number 09-055.
3. Point of contact for this action is Maria Clark, Instructional Systems Specialist, (913) 684-7332.

//ORIGINAL SIGNED//
Rhoda Risner, Ph.D.
Director, Quality Assurance Office
United States Army Command and
General Staff College

Appendix C - Setting the College Standard

Dave Bitters, November 2002

1. The Development and Assessment Division traditionally has used 66% favorable responses as a filter to determine whether a goal or objective of a course has been met. The notion of a favorable response comes from analysis of Likert scale data. With the Likert scale we ask students to provide one of 5 responses to a survey question: Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD). While these terms are somewhat vague, we think that at least they provide data that are meaningful in terms of ordinal ranking of preferences: a response of Strongly Agree is better than a response of Agree, for instance. When we analyze the responses of students to a question, we compute the percentage of responses that fall within each category, e.g. 10% SA, 60% A, 15% N, 10% D, 5% SD. We define a *favorable response* as a response of Strongly Agree or Agree. In this example, the favorable response percentage is 70%. Since this value exceeds 66%, we conclude that the associated goal or objective was met.
2. The 66% standard was developed in 1985 by MG Dave Palmer, the Deputy Commandant at the time. He and the Directors agreed that if about two-thirds of the students responded favorably to a survey question, it was an acceptable response. The College has used the 66% benchmark since this time.
3. It's possible to evaluate this standard. Since we maintain an easily accessible database of survey results we can back-test the effects of the 66% benchmark (or any other) in terms of its effect on the percentage of questions for which the favorable response percentage fails to meet the standard. To do this, we need to have some idea of the probability distribution of favorable responses overall.
4. The methodology we used to get the required probability distribution involved several steps.
 - a. We looked at all the Likert-scale questions for the 5 core courses for AY 1998-99 (a total of 194). For each of these we computed the favorable response percentage, based on the student responses.
 - b. We rank-ordered these results from lowest to highest, then plotted the results on a cumulative frequency chart (Figure 1).

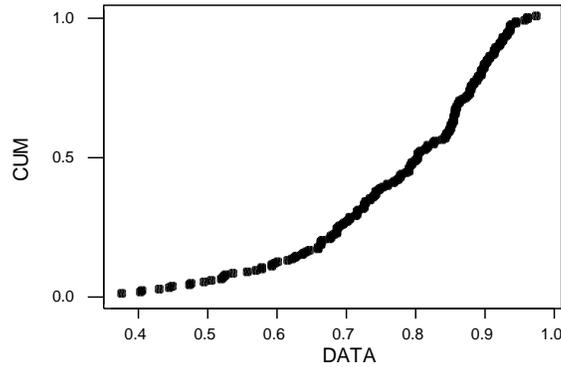


Figure 1. Cumulative Frequency Plot of AY 1998-99 Favorable Response Percentages.

This chart is interpreted as follows: For a point p on the horizontal axis (a favorable response percentage) the corresponding value on the vertical axis represents the percentage of the total questions for AY 1998-99 whose favorable response percentage fell below p .

c. Using the method of weighted sample moment estimators [see Martz and Waller, *Bayesian Reliability Analysis*, pp. 315-316], we fit these data values to a probability distribution with known form (the beta distribution) but unknown parameters. We obtained parameter estimates of $\alpha = 6.82232$ and $\beta = 1.90646$. The cumulative frequency chart for the resulting model is at Figure 2.

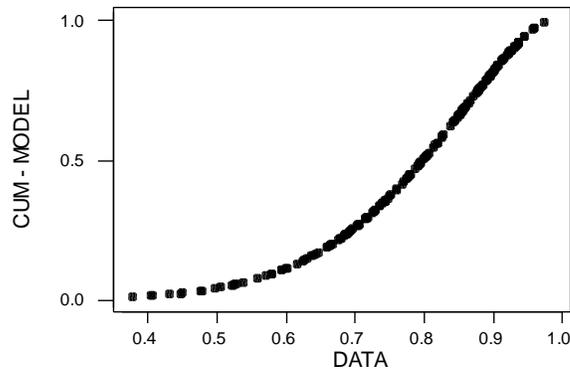


Figure 2. Cumulative Frequency Plot of Estimated Distribution.

d. We matched the data with the estimate using linear regression. A perfect fit between the data and the model would result in a straight line with a 45° angle. Figure shows that the fit very nearly achieves this objective. In fact, the regression line explains more than 99% of the error variation ($r^2 = 99.3\%$).

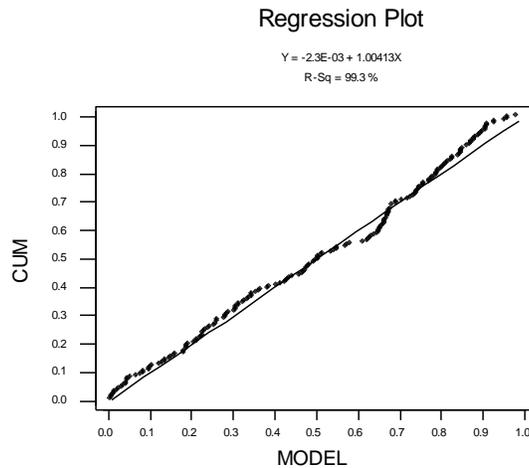


Figure 3. Fit of AY 1998-99 Data to Model.

e. To check the robustness of the model (hence its predictive value), we also looked at the data from the 8 core courses for AY 1997-98 (294 questions). In doing this, we followed the same procedure outlined in paragraphs a. and b. The cumulative frequency chart we got from this process is at Figure 4.

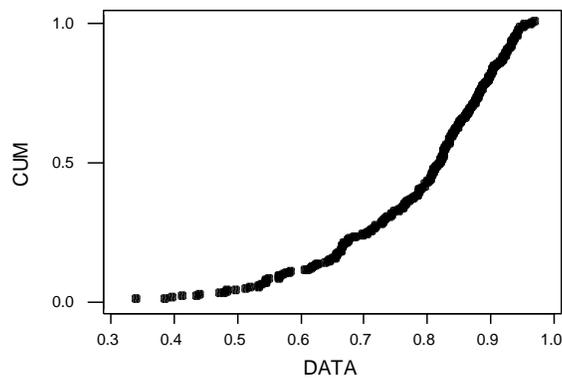


Figure 4. Cumulative Frequency Plot of AY 1997-98 Favorable Response Percentages.

f. We compared this cumulative frequency plot against the model using linear regression. The results are presented in Figure 5. Note that in this case the regression also explains 99% of the error variation ($r^2 = 99.0\%$). We conclude from this comparison that the distribution of favorable response percentages was similar in AY 1997-98 and AY 1998-99. This lends support to the idea that we can expect a similar distribution of results in AY 1999-2000.

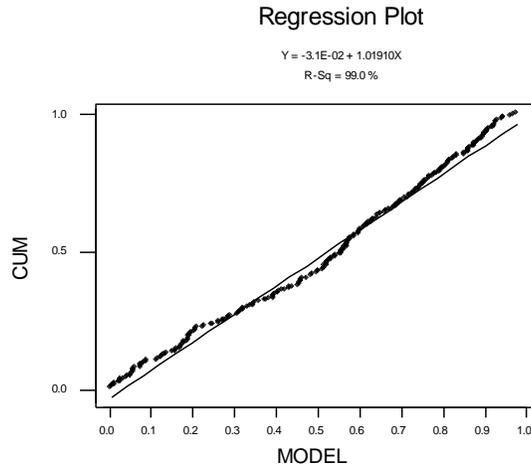


Figure 5. Fit of AY 1997-98 Data to Model.

g. We have provided a useful model for policy-makers. In Figure 6 we show a plot of the probability curve of the fitted beta distribution. To use this model, the decisionmaker can do sensitivity analysis (“what if”) based on the standard. For instance, the current standard is 66%, and the model predicts that the favorable response percentage will not meet the standard in 18.0% of the cases. If the standard were raised to 70%, for instance, the favorable response percentage will not meet the standard in 24.8% of the cases. The higher the College raises the bar, the more difficult it will be to meet the standard, and we can predict the relationship between these two variables.

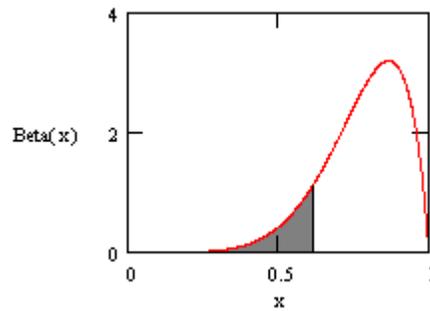


Figure 6. Probability Curve of Fitted Distribution.

In Figure 6, the standard is indicated along the horizontal axis, and the corresponding shaded area represents the percentage of questions that will not meet the standard.

Appendix D - First Email

Dear Distance Education USACGSC Student,

I am asking you to take time out of your busy schedule to help in a research project about distance education at the USACGSC. As a USACGSC Distance Education Student with experience in the USACGSC distance education program, you are most qualified to provide feedback concerning USACGSC online courses.

The purpose of this study is to the delivery of USACGSC distance education for future course delivery design.

As a graduate student at Kansas State University, I am conducting this study to complete requirements for graduation. You will receive a link for the survey via email. The survey should take less than fifteen minutes. The survey is composed primarily of a series of multiple-choice questions. There are opportunities to explain answers as well, if you wish. Attached to this email is a copy of the Kansas State University Institutional Review Board approval.

Let me assure you that participant confidentiality is guaranteed and your name will not be used or distributed outside of this study. I will send the link for the survey directly to your email address within two days of this letter.

As a participant, I will notify you and give you access to the results upon completion of the study in the next few months.

Again I cannot stress enough how valuable your help is to this research study. Thank you very much for your cooperation and participation on this study.

If you have, any questions feel free to contact me at 913-758-3357 or dawn.weston@us.army.mil.

Dawn M. Weston
USACGSC
Quality Assurance Office

Appendix E - Second Email with Online Opinion Survey Link

This is the online opinion survey about the aspects (tools) of the USACGSC distance education, which I emailed you about a few days ago.

I am a graduate student at Kansas State University, and I am conducting this survey in conjunction with my studies. Your thoughts and experiences will be of great assistance in this research project. The research results will support distance education at the USACGSC in its efforts to provide current, relative, and accessible training to USACGSC students worldwide.

Please click on the Web address (URL) below to complete and submit the survey. All responses are kept confidential.

If you cannot open the Web address, please copy the underlined text and paste it into the address field of your Web browser.

If you experience any difficulties, please contact Dawn Weston at 913-684-7330, or by email: dawn.weston@us.army.mil.

If you do not want to participate in this survey visit
<https://>
to remove your email address.

If you have, any questions contact dawn.weston@us.army.mil.

Thank you for your assistance.

Dawn M. Weston,
Kansas State University
Manhattan, Kansas

Appendix F - Reminder Email with Online Survey Link

I am asking your help in this research project. Your thoughts and experiences will be of great assistance. Along with those already responding, your answers would help with developing recommendations for the distance education program at USACGSC.

This is a reminder, please complete the survey included in the link in this message.

Please click on the Web address (URL) below to complete and submit the survey. If you cannot open the Web address, please copy the underlined text and paste it into the address field of your Web browser.

If you do not want to participate in this survey visit
<https://>
to remove your email address.

If you have, any questions contact the researcher at 913-684-7330 or dawn.weston@us.army.mil.

Thank you for your assistance.

Dawn M. Weston
Kansas State University
Manhattan, Kansas

Appendix G - Online Opinion Survey Instrument

Student Preferences for Distance Learning

Dear Student,

The following pages contain a brief survey. Although completing this survey is voluntary, your participation is very important in helping identify areas needing improvement and those that are working well.

The purpose of this survey is to provide recommendations for improving the delivery of USACGSC distance education based on student preferences.

As a graduate student at Kansas State University, I am conducting this survey to complete requirements for graduation. This survey should take less than fifteen minutes. This survey is composed primarily of a series of multiple-choice questions. There are opportunities to explain answers as well, if you wish.

Let me assure you that participant confidentiality is guaranteed and your name will not be used or distributed outside of this study.

As a participant, I will notify you and give you access to the results upon completion of the study in the next few months, if you wish.

Again I cannot stress enough how valuable your help is to this research study. Thank you very much for your cooperation and participation in this study.

Thank you for your help.

Dawn M. Weston
dawn.weston@us.army.mil
913-684-7330

Study of Student Perceived Effectiveness for the
Delivery of Distance Education Instruction at
the United States Army Command and General Staff College

USACGSC Control Number: 09-055

Demographic

Highest Educational Level.

My highest level of education is:

{Choose one}

- Bachelors Degree
- Post Bachelor Degree Courses
- Masters Degree
- Post Masters Degree Courses
- Doctoral Degree
- Other [(FILL IN OPTION)]

I am: (choose one)

{Choose one}

- Active Duty Army
- Army Reserve
- Army National Guard
- Civilian
- Other [(FILL IN OPTION)]

Internet and Distance Learning Experience

I have distance learning experience with the following (choose all that apply):

{Choose all that apply}

- College Level Classes
- Military Training
- Independent Online Classes
- Other [(FILL IN OPTION)]

Connectivity during your CGSC course work.

Most of my Internet connectivity was:

{Choose one}

- Broadband Cable
- Broadband DSL
- Broadband Wireless Card
- Office Network
- Dialup Modem
- Other [(FILL IN OPTION)]

Where did you most often connect to the Internet to do your coursework?

{Choose one}

- Home
- Work
- Other [(FILL IN OPTION)]

I post to blogs, other than for schoolwork. *{Choose one}*

- Often
- Occasionally
- Never

I use the Internet for schoolwork. *{Choose one}*

- Often
- Occasionally
- Never

I use the Internet for everyday use. *{Choose one}*

- Often
- Occasionally
- Never

I use the Internet for work. *{Choose one}*

- Often
- Occasionally
- Never

Please rank the following course options according to your preferences for learning, with “1” being your highest preference. *{Rank the following from 1 to 5}*

- In-class learning
- Online classes
- Correspondence course through the mail
- Video classes
- On-the-job training

Delivery of Course Material

Please rank the following by your preference. “1” being the highest rank.

{Rank the following from 1 to 2}

- Read course material online.
- Read course material in print.

Please rank the following by your preference. “1” being your highest preference.

{Rank the following from 1 to 3}

- Submitting written tests by mail.
- Submitting written tests by email.
- Submitting written tests online.

Please rank the following by your preference. “1” being your highest preference.
{Rank the following from 1 to 3}

- Submitting written assignments by mail.
- Submitting written assignments by email.
- Submitting written assignments online.

Please rank the following by your preference. “1” being your highest preference.
{Rank the following from 1 to 3}

- Conducting research at a library.
- Conducting research via the Combined Arms Research Library (CARL) online.
- Conducting Research using other online resources.

The delivery of course readings, written tests and written assignments.

I find reading course material online effective for my learning.

{Choose one}

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find reading course material in print effective for my learning.

{Choose one}

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find submitting my written tests by mail effective for my learning...

{Choose one}

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find submitting my written tests by email effective for my learning...

{Choose one}

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find submitting my written tests online effective for my learning...

{Choose one}

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find submitting my written assignments by mail effective for my learning.

{Choose one}

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find submitting my written assignments by email effective for my learning...

{Choose one}

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find submitting my written assignments online effective for my learning...

{Choose one}

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find going to a library to conduct research effective for my learning.

{Choose one}

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find to use the Combined Arms Research Library (CARL) online to conduct research effective for my learning.

{Choose one}

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find using other online resources to conduct research effective for my learning.

{Choose one}

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Instructional Methods.

Please rank the following by your preference. "1" being your highest preference.

{Rank the following from 1 to 5}

- Learning online without facilitation by an instructor.
- Contact with an instructor via email.
- Contact with an instructor face-to-face.
- Contact with an instructor via telephone.
- Contact with an instructor with Voice Over the Internet (VOI).

I find learning online without facilitation from an instructor effective for learning. *{Choose one}*

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find having contact from an instructor by email effective for learning. *{Choose one}*

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find having contact from an instructor using telephone effective for learning.

{Choose one}

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find having contact from an instructor using online real-time methods, such as voice over the Internet, effective for learning. *{Choose one}*

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find having face-to-face contact with an instructor effective for learning.

{Choose one}

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Interaction with other students.

Please rank the following by your preference. “1” being your highest preference.

{Rank the following from 1 to 5}

- Interaction with other students using online chat rooms.
- Interaction with other students using online message boards.
- Interaction with other students using Voice Over the Internet.
- Interaction with other students using email.
- No interaction with other students.

I find using online chat rooms effective for learning. *{Choose one}*

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find using an online message board effective for learning. *{Choose one}*

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find using email effective for learning. *{Choose one}*

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find having no contact with other students effective for learning. *{Choose one}*

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

I find real-time methods of interaction, such as voice Over the Internet (VOI), effective for learning. *{Choose one}*

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Why do you take online courses?

{Choose all that apply}

- It fits my work schedule.
- Its fits my travel schedule.
- I like working online.
- I like working at my own pace.

Your additional comments.

From your experience with other online programs, what other strategies would you like to see used in the distance education program at the Command and General Staff College? (approximately 600 character limit)

{Enter answer in paragraph form}

[(FILL IN OPTION)]

Contact Information. Providing your contact information is voluntary. Your email will not identify you with your responses to this survey.

If you would like to be provided the results of this study, please provide your email address.

{Enter text answer}

[(FILL IN OPTION)]

Thank you for your help.

Your participation will provide an understanding of student preferences for distance education.

To complete this survey, please click the “finish” button below. You will be redirected to the United States Army Command and General Staff College website. The website uses your AKO username and password for authentication. If you would like to contact the researcher see contact information below.

Again, thank you for your help.

For more information, contact me:

**Dawn Weston
dawn.weston@us.army.mil
913-684-7330**

Appendix H - Professional Panel

Dr. Henry M. Martin
Colonel, US Army Retired
Ph.D., Kansas State University, 1984
Advance Organization WarFighting Facilitator Command General Staff College Fort
Leavenworth, Kansas

Larry A. Cowherd
Lieutenant Colonel, US Army National Guard Retired
M.B.A., Touro University International, 2002
Curriculum Integrator, Department of Distance Education –
Command and General Staff College

Dr. Jill Powell
Ph.D., University of Kansas, 2006
Knowledge Manager, Battle Command Knowledge Systems

Michael W. King
Colonel, US Army Retired
M.S., Defense Management American Military University
M.S., Strategic Studies, US Army War College
Deputy Assistant Chief of Staff, Programs and Resources
U. S. Marine Corps Forces, Special Operations Command
Former Director, Department of Distance Education,
Command and General Staff College

Patricia Brigham,
Lieutenant Colonel, US Army Reserve
M.Ed., Anna Maria College
Senior Manager, Education and Technical Writing, Haemonetics Corporation
Director of Instruction, The Army School System,
CGSC Intermediate Level Education Faculty

Appendix I- Text and Paragraph Responses

Question: From your experience with other online programs, what other strategies would you like to see used in the distance education program at the Command and General Staff College?

1. I only take on-line courses because they are required. I do not benefit from on-line courses. If these courses are important enough that they are required, then face-to-face instruction is the best method. As a reservist, I work full-time. Trying to fit in on-line learning with all the other requirements that I have --to include family time is very distracting. I need to be on orders, sequestered away from every other demand and I need to be side-by-side my group members interacting face-to-face with my instructor. Set me up for success, not failure.

2. I don't have extensive experience with other online programs. I would prefer personal interaction.

3. When I was working on my masters, the posting was very effective in the learning process. When everyone was respectful in critiquing the comments it made learning better. When students posted comments that had nothing to do with the course it was, not effective but the facilitator was always good at keeping everyone on track. It was an enjoyable experience. Team projects were done with IM, which was effective in assigning tasks.

4. So far, it has been a pretty good experience. I would recommend a time in which students come together for a face-to-face contact (2 week AT). This in conjunction with the online efforts would be great.

5. Not sure how to solve the distance learning problem. I just know I will never do it again.
6. I do not enjoy taking courses online. I wish that I would have been boarded and attended the course on active duty. Active duty has you working in person with students and learning from others. Online is not equivalent.
7. Please note that I am taking AOWC via on-line because I have no choice. I believe the Army needs to substitute the on-line exercises w/ in the classroom lessons in order to get the ultimate out of real staff work and interaction amongst the students.
8. Per your question above: Why do you take online courses? Because the Army forces these courses on Reserve Soldiers. Reserve Soldiers should have the same access to resident courses as active duty Soldiers, anything less is bovine feces. There are too many issues such as connectivity, Soldiers having to spend their own money to prepare for class and a host of other issues that affect the Reserve Soldier. I do not care for on-line classes unless the Soldier requests to do it that way.
9. Sending course material and video classes to students via CD. The videos do not work when internet is limited. Often students are in distant places and have disruptive schedules. Courses should be segmented into all individual and then group work. This allows for better planning on students behalf.
10. A set schedule should not be used for the AOWC distance learning program. The set schedule established by the AOWC facilitator restricts the flexibility of fitting an online course into an Army officer's work schedule. Deployments, PCS's, and work-surges are common aspects of an Army officer's schedule an online program should allow the

officer to work at their own pace. Bottom-line: the AOWC online course is the terrible waste of time and effort.

11. I think things are laid out well. Some instructions still reference mailing work in, but the instructor clarified to upload info.

12. I only take online courses when forced to (i.e. AOWC). Would much rather take a standard classroom class, and learn much more effectively that way. The main issue I have with AOWC is that it is an after-work mandatory class. There is no time to conduct the training while at work, but it is a mandatory course.

13. There needs to be a culminating exercise with everyone at Ft. Leavenworth. MDMP is difficult and cumbersome, at best, using DCO or others. It ends up with a few doing the lion's share of the work. MDMP is not suited to this method and has a negative effect on learning.

14. Video conferencing; I am looking forward to using it in my AOWC class!

15. I'm forced to take AOWC on-line. For all practical purposes, no other option is available--I've asked several times and that has been the consistent response. Thank you for this opportunity. Wish you well in your research.

16. Make print publications available as opposed to just online

17. The DCO experience was inadequate for an effective learning environment. Bad connections and or inadequate broadband width made it extremely difficult to learn and sometimes even participate in class discussion.

18. For AOWC make the entire thing independent - trying to link up with people all over the world once a week via the internet I think will be a nightmare.

19. The ONLY reason I am taking online courses is because it is the ONLY method offered by the Army. I HATE trying to learn this way. I believe the Army has an obligation to train us, not to simply push us into and through online classes, and then say we are officially “educated,” when we all know it is not the truth. We are cutting off our noses to spite our faces by not making classroom education part of the Reserve Component experience, just as we do for the Active Component Soldiers.

20. I received my Masters Degree while taking some online courses, CGSC is on par with their peers. However, taking online course is not advantageous to the students learning. It actually hinders collaboration and group work. A select few from the group will do all the work and while there are some that sit off to the side and do nothing. I highly advise against a strictly online program. I recommend a hybrid between online and class room. I would be interested in providing assistance or input to assist in the process.

21. I found the course very conducive to my learning. Use of the adobe connect without the instructor allowing us to get in would be a lot better.

22. Make it mandatory for units to give the students time within their work schedule to complete class work. Everyone I know who has/is doing AOWC via DL is doing it on their own time in the evenings.

23. We must better integrate DCO/Online meeting time with a more reliable voice capability. Chat works, but the voice we've used on Breeze/DCO comes in choppy or has a lot of feedback. Suggest that phone bridges be utilized as a conference method for all to speak in conjunction with DCO/Online meetings so voice is more reliable.

24. I would like to see AOWC taught all on line at my own pace like the common core or via classroom with the TASS BNs with face to face facilitation. I think the current

method is a complete waste of time and by the way most other students (Peers) answered questions and contributed work, I think that they are not getting much out of it and are riding on mine and other's coat tails to pass the program. I think covering one block of instruction per week is useless. I rate the current AOWC method of instruction a 2 (low score) with 10 being the highest.

25. Any distance education training should take place PRIOR to the resident phase. The resident phase should be the culminating event. When we enrolled in AOWC we thought we only had one more 2 week period to complete. At that W300 (2 week training) we learned that we must complete W100 and W200 before we would get a 1059 for AOWC.

26. Take the end of course exercises out of the distance education program and put them in a 1-2 week in class phase where students and faculty and effectively perform collaboration in a timely real-time environment rather than spreading it out over 2-3 weeks. It is tough to focus on a group exercise when your main focus is work and family. In order to get the full effect you need to pull the students away from the distracters.

27. I would like to see more online chat, sharing of final individual products after they are graded. Allow other options to complete assignments rather than primarily collaborative.

28. The OPTEMPO makes online learning unrealistic. Since returning to my unit I have been tasked as a CAO for the last three weeks and I have not been able to continue any online work at all. When I return, I will hit the middle of our deployment training schedule and again, my priority will be to assist my unit in getting ready for a real time mission. Several of us have primary staff experience at brigade and division level and the experience should count as constructive credit since planning a notional exercise is redundant to us. I can only imagine what will happen when deployed.

29. My answer for why I take on-line classes is that you have taken away most of the classroom options. ILE-DL and AOWC-DL have been paperwork drills. I really like the instructors, but I wish you would bring back the classroom for those of us who prefer it. I got enough great ideas, stories, and experiences out of ILE Phase I at Ft. Dix to really shape the second half of my career. Going on-line just cheapens the experience.

30. Distance learning online is great, the AOWC course is well put together with one exception trying to synchronize the activities of 14 students doing MDMP is not worth it. All deliverables should be the students work alone.

31. Quit moving the bars. Quit having contractors make new modules. Do not teach old stuff. If something changes all POI's should be changed in mid course. If you cannot respond this fast to change you are not relevant to me and your lessons are treated as something to plow through. I will have to find the current information elsewhere.

32. The school should provide students with pre-configured laptops. Every effort should be made to build staff groups by location, which provides flexibility for students to meet face to face to complete coursework.

33. I would prefer to have received credit for AOWC (JPME1) as did the resident students at Leavenworth instead of going through an additional hurdle that appears to be revisiting material covered in DL (ILE). I had been enrolled in an AOWC satellite course at a reserve training site and it was cancelled (as well as the other reserve courses)for whatever reason (unknown). Hence DL AOWC. I much prefer attendance of a course at a duty location rather than online or via VTC. Wish there was more funding for more reserve officers to attend resident course.

34. I have to for career advancement

35. More chat room discussion between students
36. I would like to see (or have access) to actual examples of the work. For example, the Slides from CFLCC on the S1 / S2 / etc. Running Estimates, etc.
37. I believe the strategies employed, such as submitting assignments through email make it simplistic. Some of the flash lessons are difficult to open at times. Perhaps these lessons could be QC'd prior to students accessing them. Thank-you,
38. Applications like Webtyco, I like the way UMUC and AMU have their learning centers setup.
39. The ability to have online conference ability via the phone to collaborate vs the students having to find this resource. Our class used this regularly to get assignments completed for AOWC. Our class had one student who had this capability, which greatly added to the class discussion and learning curve.
40. The weekly VOI is a waste of time - the information has done nothing to amplify the course work. The distance learning needs to be individual. Too many of us have deployments and work commitments that make it difficult to interact effectively with other students.
41. Options for doing this course without being tied to others. Being West Coast and now in Iraq, it is often difficult to meet the times that other student got together.
42. The requirement for certain time/date on line coordination with instructors and other students is a very negative attribute of the DL program. While it should be available as an additional add-on resource, on-line conferences and sessions tied to date-time groups are counterproductive to the end state of education via flexible schedules. It is no longer a

means to an end that is achievable to a broad audience. It becomes merely a cheap means of education. The “quality through flexibility” aspect is completely lost.

43. Bottom Line is that having an online staff group is not effective for exercises. Course moved too fast and group exercises were not effective. Keep the basic W100, W200, W300 coursework online with submissions to an instructor. A few times a year offer a resident course that meets to conduct W199, W299, and W399. This way you can get all of the online students back together and put a sanity check on the learning process. Most active duty folks can/would be able to fit a week or two of TDY to finish these exercises if it means getting the requirements completed.

44. The introduction/orientation of the class should be done in person. Use of the online capabilities should be trained during an in person orientation either at Ft Leavenworth or other academic location.

45. The final exercise should be done in person at Ft Leavenworth or other location. I find it hard to believe that the current video online conduct of AOWC is in any way equivalent to the resident course. Either go completely individual, IDT or do a 2 week phase.

46. This is really the answer to the question above, but you didn't offer a wide enough range of choices. I take online courses (ILE in particular) because I don't have a choice. the Army wants 100% ILE completion for AC Officers, but my unit couldn't spare the year away. Now I do this deployed because I was ordered to do so in lieu of the traditional course. I think you will find this to be the case with a large population of the AC MFE officers that were required to attend this. Many of us are deployed by the way.

47. I think the group assignments (staff products) need to be removed from the DL format. They are too difficult to conduct and you do not get input from all members.

These should be conducted in the resident phase.

48. Realize that the Army is making a huge tradeoff when you settle for DL instruction of RC students in AOWC. You get social promotion of minimally participating students while some work very hard to achieve the same passing standard. There should be a resident weekend or a few in the DL course where students meet face-to-face with the instructor and each other. Every month I am approving over \$100,000 of travel in my unit. Can't CGSC fund something to improve the experience of this course? Maybe you don't want us to see how nice the real classrooms are.

49. I would like to see the on-line courses begin with the class meeting for a week or two resident phase and then go into the online phase of the program.

50. Perhaps building in occasional TDY time to go back to Leavenworth to collaborate on a project together for a week.

Appendix J - Pilot Student Comments

Question: Do you have any suggestions to improve the survey?

1. No; it was clear and painless!
2. Have a background. Stark white is not the best. Welcome page is a bit wordy. Get rid of the opt-out link on the survey invitation and reminder. All-in-all, it's good though.
3. After the question about "Connectivity during your CGSC coursework" I would also add a question as to WHERE the most often used
4. Connectivity was from -home/work/class site etc.
5. Online experience-this just seems to hang here.....what is it you are really trying to get to here????? Are you trying to ascertain that there is a difference between those who use the internet anyway being comfortable and those NOT using internet NOT being comfortable-- would add "I am comfortable using the internet for general use
6. Would you not want to know WHY they are in distance this could have an impact on their answers? Did they choose distance because they prefer this method, or because they had no other choice. . . . And if no other choice . . . have them pick the reason--schedule; location/availability of classes; deployment; other
7. Change the font to arial, verdana or sans serif. It displays better on the screen and is pretty much a web standard.

Appendix K - Survey Results

Count and Percent Student Distance Learning Preferences

	Count	Percent
Highest Educational Level. My highest level of education is:		
(Not Answered)	1	1.10 %
Bachelors Degree	13	14.29 %
Post Bachelor Degree Courses	17	18.68 %
Masters Degree	46	50.55 %
Post Masters Degree Courses	7	7.69 %
Doctoral Degree	2	2.20 %
Other	5	5.49 %
Total Responses	91	100.00 %

Distance Learning Experience . I have distance learning experience with the following (choose all that apply):

(Not Answered)	21	23 %
College Level Classes	43	26.54 %
Military Training	86	53.09 %
Independent Online Classes	28	17.28 %
Other	3	1.85 %
Total Responses	162	100.00%

Connectivity during your CGSC course work. Most of my Internet connectivity was:

(Not Answered)	2	2.20 %
Broadband Cable	33	36.26 %
Broadband DSL	26	28.57 %
Broadband Wireless Card	11	12.09 %
Office Network	12	13.19 %
Dialup Modem	3	3.30 %
Other	4	4.40 %
Total Responses	91	100.00%

Where did you most often connect to the Internet to do your coursework?

(Not Answered)	1	1.10 %
Home	58	63.74 %
Work	21	23.08 %
Other	11	12.09 %
Total Responses	91	100.00%

	Count	Percent
I post to blogs, other than for schoolwork.		
(Not Answered)	8	8.79 %
Often	6	6.59 %
Occasionally	17	18.68 %
Never	60	65.93 %
Total Responses	91	100.00%
I use the Internet for schoolwork.		
(Not Answered)	4	4.40 %
Often	59	64.84 %
Occasionally	25	27.47 %
Never	3	3.30 %
Total Responses	91	100.00%
I use the Internet for everyday use.		
(Not Answered)	5	5.49 %
Often	80	87.91 %
Occasionally	4	4.40 %
Never	2	2.20 %
Total Responses	91	100.00%
I use the Internet for work.		
(Not Answered)	5	5.49 %
Often	81	89.01 %
Occasionally	4	4.40 %
Never	1	1.10 %
Total Responses	91	100.00%
I am: (choose one)		
(Not Answered)	2	2.20 %
Active Duty Army	39	42.86 %
Army Reserve	24	26.37 %
Army National Guard	21	23.08 %
Civilian	2	2.20 %
Other	3	3.30 %
Total Responses	91	100.00%

	Count	Percent
I find reading course material online effective for my learning.		
(Not Answered)	1	1.10 %
Strongly Disagree	6	6.59 %
Disagree	18	19.78 %
Neutral	23	25.27 %
Agree	36	39.56 %
Strongly Agree	7	7.69 %
Total Responses	91	100.00%
I find submitting my written tests by mail effective for my learning.		
(Not Answered)	1	1.10 %
Strongly Disagree	18	19.78 %
Disagree	30	32.97 %
Neutral	28	30.77 %
Agree	13	14.29 %
Strongly Agree	1	1.10 %
Total Responses	91	100.00%
I find submitting my written tests by email effective for my learning.		
(Not Answered)	1	1.10 %
Strongly Disagree	2	2.20 %
Disagree	4	4.40 %
Neutral	22	24.18 %
Agree	50	54.95 %
Strongly Agree	12	13.19 %
Total Responses	91	100.00%
I find submitting my written tests online effective for my learning.		
(Not Answered)	1	1.10 %
Strongly Disagree	3	3.30 %
Disagree	4	4.40 %
Neutral	16	17.58 %
Agree	42	46.15 %
Strongly Agree	25	27.47 %
Total Responses	91	100.00%
I find submitting my written assignments by mail effective for my learning.		
(Not Answered)	1	1.10 %
Strongly Disagree	19	20.88 %
Disagree	26	28.57 %
Neutral	31	34.07 %
Agree	12	13.19 %
Strongly Agree	2	2.20 %
Total Responses	91	100.00%

	Count	Percent
I find submitting my written assignments by email effective for my learning..		
(Not Answered)	2	2.20 %
Strongly Disagree	3	3.30 %
Disagree	3	3.30 %
Neutral	22	24.18 %
Agree	47	51.65 %
Strongly Agree	14	15.38 %
Total Responses	91	100.00%

I find submitting my written assignments online effective for my learning.		
(Not Answered)	2	2.20 %
Strongly Disagree	3	3.30 %
Disagree	6	6.59 %
Neutral	17	18.68 %
Agree	42	46.15 %
Strongly Agree	21	23.08 %
Total Responses	91	100.00%

I find going to a library to conduct research effective for my learning.		
(Not Answered)	2	2.20 %
Strongly Disagree	4	4.40 %
Disagree	18	19.78 %
Neutral	23	25.27 %
Agree	35	38.46 %
Strongly Agree	9	9.89 %
Total Responses	91	100.00%

I find to use the Combined Arms Research Library (CARL) online to conduct research effective for my learning.		
(Not Answered)	2	2.20 %
Strongly Disagree	5	5.49 %
Disagree	5	5.49 %
Neutral	32	35.16 %
Agree	39	42.86 %
Strongly Agree	8	8.79 %
Total Responses	91	100.00%

	Count	Percent
I find using other online resources to conduct research effective for my learning.		
(Not Answered)	3	3.30 %
Disagree	3	3.30 %
Neutral	5	5.49 %
Agree	54	59.34 %
Strongly Agree	26	28.57 %
Total Responses	91	100.00%

I find learning online without facilitation from an instructor effective for learning.		
(Not Answered)	1	1.10 %
Strongly Disagree	17	18.68 %
Disagree	28	30.77 %
Neutral	17	18.68 %
Agree	24	26.37 %
Strongly Agree	4	4.40 %
Total Responses	91	100.00%

I find having contact from an instructor by email effective for learning.		
(Not Answered)	2	2.20 %
Strongly Disagree	1	1.10 %
Disagree	12	13.19 %
Neutral	21	23.08 %
Agree	49	53.85 %
Strongly Agree	6	6.59 %
Total Responses	91	100.00%

I find having contact from an instructor using telephone effective for learning.		
(Not Answered)	1	1.10 %
Strongly Disagree	2	2.20 %
Disagree	5	5.49 %
Neutral	31	34.07 %
Agree	47	51.65 %
Strongly Agree	5	5.49 %
Total Responses	91	100.00%

	Count	Percent
I find having contact from an instructor using online real-time methods, such as voice over the Internet, effective for learning.		
(Not Answered)	1	1.10 %
Strongly Disagree	2	2.20 %
Disagree	8	8.79 %
Neutral	20	21.98 %
Agree	47	51.65 %
Strongly Agree	13	14.29 %
Total Responses	91	100.00%
I find having face-to-face contact with an instructor effective for learning.		
(Not Answered)	1	1.10 %
Disagree	3	3.30 %
Neutral	2	2.20 %
Agree	19	20.88 %
Strongly Agree	66	72.53 %
Total Responses	91	100.00%
I find using online chat rooms effective for learning.		
(Not Answered)	1	1.10 %
Strongly Disagree	10	10.99 %
Disagree	10	10.99 %
Neutral	28	30.77 %
Agree	35	38.46 %
Strongly Agree	7	7.69 %
Total Responses	91	100.00%
I find using an online message board effective for learning.		
(Not Answered)	2	2.20 %
Strongly Disagree	8	8.79 %
Disagree	11	12.09 %
Neutral	26	28.57 %
Agree	32	35.16 %
Strongly Agree	12	13.19 %
Total Responses	91	100.00%
I find using email effective for learning.		
(Not Answered)	1	1.10 %
Strongly Disagree	2	2.20 %
Disagree	8	8.79 %
Neutral	29	31.87 %
Agree	40	43.96 %
Strongly Agree	11	12.09 %
Total Responses	91	100.00%

	Count	Percent
I find having no contact with other students effective for learning.		
(Not Answered)	1	1.10 %
Strongly Disagree	26	28.57 %
Disagree	34	37.36 %
Neutral	15	16.48 %
Agree	11	12.09 %
Strongly Agree	4	4.40 %
Total Responses	91	100.00%

I find real-time methods of interaction, such as voice Over the Internet (VOI), effective for learning.		
(Not Answered)	1	1.10 %
Strongly Disagree	5	5.49 %
Disagree	9	9.89 %
Neutral	19	20.88 %
Agree	35	38.46 %
Strongly Agree	22	24.18 %
Total Responses	91	100.00%

Why do you take online courses?		
(Not Answered)	16	10.32 %
It fits my work schedule.	62	40.00 %
Its fits my travel schedule.	21	13.55 %
I like working online.	18	11.61 %
I like working at my own pace.	38	24.52 %
Total Responses	155	100.00%

Approximately how long did this survey take to complete?		
(Not Answered)	91	100.00%
Total Responses	91	100.00%