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## **Student Satisfaction in Traditional, Online, and Hybrid Continuing Education Courses**

*A Case Study*

**Dr. Leah Flores Goerke**

Director, Commanders' Professional Development School,  
Ira C. Eaker Center for Professional Development



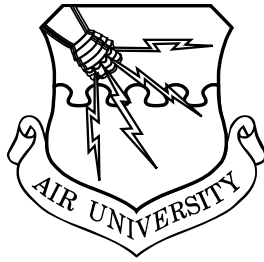
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## **About the Author**

Dr. Leah Flores Goerke is the director of the Commanders' Professional Development School and course director for the USAF Senior Materiel Leader Course at the Ira C. Eaker Center for Professional Development, Air University, Maxwell Air Force Base, Alabama.

Dr. Goerke served 20 years as an Air Force officer, educator, engineer, and program manager with 11 years of engineering and acquisition program management experience to include program management activities in three major weapon system program offices. Duties included the application of policies, practices, regulations, and laws concerning acquisition management and sustainment processes and initiatives. Her experiences ranged from programming and budgeting responsibilities in major weapon system programs, to conducting nuclear airblast simulation analyses in a laboratory environment. She has served the National Aeronautics and Space Administration, Department of Defense (DOD), and Air Force organizations that govern, interface with, and influence life cycle management of national and DOD assets.

Dr. Goerke has 17 years of military and civilian experience as an educator, serving as an Air Force Reserve Officers' Training Corps instructor, Air Command and Staff College instructor, and Eaker Center instructor. As a traditional and online instructor, she taught various subjects ranging from national security to leadership development. As the director for the Commanders' Professional Development School she is responsible for orchestrating all activities for developing and executing precommand education programs for wing commanders and vice commanders, group commanders, and senior materiel leaders.



## **Abstract**

Instructors of military continuing education courses transitioned traditional classroom leadership courses to fully online and hybrid formats that combined online and face-to-face instruction. No evaluation of student satisfaction during the transition was conducted using research-based practices. The purpose of this mixed methods research study was to examine student satisfaction of traditional, hybrid, and online delivery of two military continuing education courses using research-based practices. This empirical study was grounded in Malcolm S. Knowles, Elwood F. Holton III, and Richard A. Swanson's adult learning theory as well as Terry Anderson's and Gilly Salmon's online learning theories. Data from 96 course evaluations from students who completed traditional, online, and hybrid versions of two military continuing education courses were analyzed. Kruskal-Wallis analyses of variance tests were used to examine student satisfaction ratings for significant differences. Student satisfaction narrative data were analyzed using thematic analysis and axial coding. There were no significant differences in student satisfaction ratings among course delivery methods. Course relevance to jobs, instructor quality, interactivity, and student support were found as common themes in the student comments. The findings of this study would suggest traditional courses could be transitioned to online and hybrid delivery with particular attention to ensuring the courses contain job-related content, high quality instructors incorporate interactive activities, and school staff personnel provide robust support. Online and hybrid versions of traditional leadership courses may enable DOD military and civilians serving abroad or in deployed locations to keep up with their professional development.



## Introduction

Because of declining budgets and reduced personnel resources, senior military officials are encouraging the use of online technologies to provide cost-effective solutions for military professional development.<sup>1</sup> As a result, military course providers are rapidly transitioning traditional classroom courses to online and hybrid formats that combine online and face-to-face instruction. Little comparative research has been published that addresses the viability of online delivery formats as a replacement for traditional military continuing education courses. To address this need, two military continuing education courses transitioning from traditional delivery to online and hybrid delivery were examined in this study.

Consistent with the services' visions, instructors at the Military School (pseudonym), a major provider of military continuing education courses, initiated the development of online versions of two traditional courses in 2011. Course 1 (pseudonym) transitioned to a fully online course, and Course 2 (pseudonym) transitioned into a hybrid course that combined face-to-face classroom instruction with online coursework. These courses were a part of professional development programs for military officers and management-level civilians selected to assume midlevel leadership roles in base organizations.

From 2009 to 2011, the Military School instructors offered these courses exclusively as two-week traditional classroom courses for male military, female military, and civilian personnel who were assuming midlevel management responsibilities. The students temporarily relocated to the Military School from their home military bases to complete the courses. The first week of the traditional course focused on general leadership and management topics including doctrine, leadership and management principles, and critical thinking skills and their applications. The second week included specific topics such as military personnel support, manpower and organization operations, and civilian personnel support. The Military School offered the courses two to five times a year to classes ranging in size from 10–25 students.

Beginning in 2012, the Military School instructors piloted online and hybrid versions of these courses. In 2012, Course 1 instructors transitioned the entire two-week course to online delivery. In 2013, Course 2 instructors replaced the first week of the course with 40 hours of online coursework addressing general leadership topics. The second week of Course 2 was replaced with five days of traditional face-to-face classroom instruction at the Military School that covered the job-specific leadership topics.

As part of the school's course administration procedures, the Military School instructors have been collecting and archiving student satisfaction data for both courses under examination since 2007 using an end of course evaluation (EOCE) (see appendix). Military School instructors continued to administer the same EOCE to students taking the online and hybrid version of both courses under examination. However, Military School personnel did not conduct formal comparative analyses of student satisfaction data as courses were transitioned from traditional to online and hybrid course delivery. The collection of these survey data for both courses as they transitioned to different delivery methods presented an opportunity to compare student satisfaction data from two courses offered in traditional, hybrid, and fully on-line versions.

## **Literature Review**

### **Theoretical Framework**

**Adult learning theory.** Malcolm S. Knowles, Elwood F. Holton III, and Richard A. Swanson's theory of adult learning (hereafter: "Knowles' theory") provided the theoretical foundation for examining student satisfaction in traditional, online, and hybrid courses. In computer-based instruction, the adult learner characteristics of self-direction and self-motivation detailed in Knowles' theory are critical to successful course completion.<sup>2</sup>

Self-direction was described as when a person matures beyond a dependence on others to directing his or her own activities, to include participating in learning opportunities.<sup>3</sup> Online instruction, especially asynchronous activities, requires the learner to be self-directed because activities are not monitored by an instructor in real time and are conducted at the learner's own pace. Instructional modules must be designed to account for this autonomy and, therefore, must be learner-centered and encourage a high degree of self-direction. The design and support of learning modules must take into account the online student's degree of self-direction.<sup>4</sup> The online portion of the courses that were studied consisted of modules that required students to complete 80 percent of the coursework asynchronously. This study examined differences in student satisfaction data for traditional, online, and hybrid courses. It was anticipated student satisfaction might be higher for the online and hybrid courses based on a greater opportunity for self-direction.

Because of the high percentage of asynchronous activities in the courses being studied, self-motivation is also critical to student success. Self-motivation is when adults are motivated to learn by internal factors rather than



external ones.<sup>5</sup> As such, adults, whether motivated by an interest in personal development, the prospect of financial gain, or professional advancement, will most likely choose to engage in a future learning opportunity. Students in the research sample were transitioning from working-level to management-level positions and were required to successfully complete the courses being studied for both professional advancement and financial gain. Raymond J. Wlodkowski described this conditioned propensity as a deep social value and force. Similarly, Vivian W. Mott, as cited by Wlodkowski, pointed out that adults are more prone to choose learning opportunities relevant to their jobs.<sup>6</sup>

**Online learning theory.** Anderson proposed, while adult learning theories such as Knowles' theory continue to apply to online learning, technology introduces new challenges such as online community building and virtual interaction in the absence of physical social cues.<sup>7</sup> Rena M. Palloff and Keith Pratt went so far as to state instructors must abdicate "our tried and true techniques that may have served us well in the face-to-face classroom in favor of experimentation with new technologies and assumptions."<sup>8</sup> Gilly Salmon postulated creating a sense of community online is vastly different than managing group dynamics in the face-to-face classroom.<sup>9</sup>

To address these challenges, Knowles' theory emphasized the importance of aligning several factors including self-direction to create successful computer-based instruction.<sup>10</sup> Anderson's theory of online learning focusing on learner interactions with other learners, the instructor, and the content of the course, suggested successful online learning depended on at least one of these types of interactions operating at a high level.<sup>11</sup> In Salmon's theory, learning-centered e-moderators who emphasized collaborative learning and community building replaced content-centered instructors in the online classroom.<sup>12</sup>

### **Comparative Research in Traditional and Online Education Settings**

In military education settings, studies conducted by a single researcher were found that addressed traditional and online course delivery. Anthony R. Artino examined the relationship between military students' personal factors and their choice of instructional format.<sup>13</sup> In another study, instructional design was identified by Artino as the strongest contributor to overall student satisfaction with online courses.<sup>14</sup> Artino also found students were more satisfied with online learning tasks if they were perceived to be interesting, useful, and important. In a third study, Artino suggested a higher level of online in-

structor support was necessary to overcome low student critical thinking skills and student procrastination.<sup>15</sup>

In civilian education settings, a number of researchers have conducted comparative research comparing student satisfaction in traditional, hybrid, and online classroom settings. Results from 20 comparative studies were mixed. Only three studies—conducted by Amy J. Bayliss and Stuart J. Warden, Cassandra DiRienzo and Gregory Lilly, and Reginald O. York—found no significant differences in student perceptions about the efficacy of traditional, online, and hybrid courses, the civilian equivalent to course mission accomplishment.<sup>16</sup> The remainder of the comparative studies reported both favorable and unfavorable perceptions of hybrid and online courses when compared with those offered face-to-face.

In the area of course management, flexibility and convenience of courses offered in the hybrid and online instructional formats were consistently identified in recent comparative studies as a contributor to favorable student perceptions. Pamela Lam and Sarbari Bordia identified instructional design as a top consideration in generating positive perceptions among graduate students taking an online course.<sup>17</sup> Modular designs enabled students to view course information on demand and multiple times to reinforce important concepts in the content areas covered.<sup>18</sup> Instructional design was also identified by Artino in 2008 as the strongest contributor to overall student satisfaction with online courses. Artino also found that students were more satisfied with online learning tasks if they were perceived to be interesting, useful, and important.<sup>19</sup> Business professionals, police officers, and undergraduate students identified flexibility and convenience as the things they liked most about hybrid and online education.<sup>20</sup> An online course was also shown to enable students hindered by physical constraints to take a hybrid course.<sup>21</sup>

In contrast, poor course and instructional design practices were identified by researchers as contributing to unfavorable student satisfaction in online and hybrid courses. Researchers found that replicating classroom lectures by posting notes online or employing noninteractive online lecturing techniques detracted from the quality of distance education courses.<sup>22</sup> A perceived increase in workload for online and hybrid courses also lowered student satisfaction.<sup>23</sup> Finally, course technology challenges, computer availability, and internet access issues negatively affected student satisfaction with online and hybrid courses.<sup>24</sup> David Starr-Glass reported deployed military students noted technical issues detracted from the learning experience.<sup>25</sup>

Poorly designed student-student interaction learning opportunities, or a lack thereof, also contributed to negative student perceptions. J. B. Arbaugh, Michael R. Godfrey, Marianne Johnson, Birgit Leisen Pollock, Bruce Nien-

dorf, and William Wresch reported lower student satisfaction ratings across various business disciplines for online courses due to a lack of peer interaction.<sup>26</sup> In both of his studies, Brian W. Donavant reported a lack of peer interaction in a police continuing education course offered online was the element most disliked by the students.<sup>27</sup> Lisa Kirtman similarly reported negative comments from graduate students pursuing an online master's degree in education due to perceived lower peer interactions.<sup>28</sup> One student in Kirtman's study commented, "At times you have questions that you don't know you have until someone else in class asks them."<sup>29</sup> Cara Rabe-Hemp and Susan Woollen tied significantly lower peer interactions with lower student satisfaction ratings for an online criminal justice course.<sup>30</sup>

When considering course instruction, the quality of instructor-to-student interaction was found by researchers to be critical to student perceptions of hybrid and online courses. Lam and Bordia identified student-instructor interactions as the most important contributing factor to positive student perceptions of an online course "to actively share, explore, and discuss ideas and insights" and "build confidence in their ability to understand key concepts."<sup>31</sup> Sidney R. Castle and Chad J. McGuire correlated the highest levels of student-instructor interaction ratings with the highest levels of student satisfaction in hybrid and online courses.<sup>32</sup> In a 2008 study conducted by Jon Lim, May Kim, Steve S. Chen, and Cynthia E. Ryder, hybrid and online students reported higher quality interactions with their professors contributed to higher course satisfaction ratings when compared with those of students taking the traditional version of the same course.<sup>33</sup> Nanette P. Napier, Sonal Dekhane, and Stella Smith also identified student interactions with the professor as contributing to positive student perceptions of a hybrid computer course.<sup>34</sup> Agi Horspoole and Carsten Lange found students in both traditional and online courses perceived they enjoyed high quality communication with their instructors.<sup>35</sup> Siu-Man Raymond Ting and Laura M. Gonzalez found student perceptions of online learning were positive due to the effects of online interactions with their instructors and each other.<sup>36</sup> Suzanne Young and Heather E. Duncan similarly found there was a connection between higher course satisfaction levels and higher student-instructor interactions, though their study found higher satisfaction levels among those enrolled in traditional courses.<sup>37</sup>

In a study comparing a traditional version of a course and two online versions of the same course, Joe Nichols found fewer students were satisfied with the online version of the course because it minimized instructor involvement.<sup>38</sup> Donavant and LaDonna Hale, Emily A. Mirakian, and David B. Day reported a lack of student-facilitator interaction detracted from the perceived

quality of an online course.<sup>39</sup> In his 2009 study, Artino suggested a higher level of online instructor support was necessary to overcome low student critical thinking skills and student procrastination.<sup>40</sup>

## Method

### Purpose of the Study

The purpose of this study was to evaluate hybrid and online delivery of two Military School courses after they were transitioned from traditional delivery by analyzing student satisfaction data. A mixed methods approach was used combining analyses of student satisfaction numerical data narrative comments. The results of this study may provide insight into more effective ways to transition courses from traditional to hybrid and online delivery. The study may also add to the sparse body of comparative research literature addressing civilian and military continuing education, while, at the same time, offering senior military leaders, faculty, and support staff insights from comparisons made in a military education setting. The following research question guided the study.

RQ1: Is there a significant difference in student satisfaction after the Military School's Course 1 and Course 2 transitioned from traditional delivery to online and hybrid delivery?

$H_0$ 1: There is no significant difference in student satisfaction after the Military School's Course 1 and Course 2 transitioned from traditional delivery to online and hybrid delivery.

$H_1$ 1: There is a significant difference in student satisfaction when the Military School's Course 1 and Course 2 transitioned from traditional delivery to online and hybrid delivery.

RQ2: What are Military School students' perceptions of the traditional, online, and hybrid versions of Course 1 and Course 2?

## Research Design

**Setting and sample.** The research study was conducted at the Military School, a provider of military continuing education courses. The two courses under examination were part of leadership professional development programs for midcareer officers and midlevel management civilians working for the DOD, the population of this study. Prior to 2012, the courses were offered once a year as two-week traditional courses at the Military School. Both courses were intended to prepare male and female military and civilian personnel to lead midlevel military organizations.

Twenty-four students graduated from Course 1 in 2010 from the last traditional classroom course offering before it transitioned to an online course. In 2012, the online version replaced both weeks of traditional instruction with eight weeks of online course work. Nine students graduated from the initial offering of the online version and completed the EOCE. In 2013, four students graduated from the second offering of the online version and completed the EOCE. Eleven students graduated from Course 2 in 2010 from the last traditional classroom course offering. In 2013, this course was transitioned to a hybrid format that combined four weeks of prerequisite online course work with five days of traditional classroom instruction at the Military School. Sixteen students graduated from the first hybrid class and completed course evaluations.

Ninety-six course evaluations were analyzed from course offerings in 2010 immediately preceding the transitions and course offerings in 2012–2013 shortly after the transitions from traditional to online and hybrid formats. This sample included male and female military and civilian students who took these leadership continuing education courses offered at the Military School who are midlevel managers and who were required to complete this training shortly after assuming their positions.

Convenience sampling was appropriate for this study because the results were primarily required for Military School stakeholder decision making.<sup>41</sup> The research sample included military and civilian students who had participated in either traditional, online, or hybrid courses. Because the EOCE was taken anonymously, it was not possible to distinguish between military and civilian respondents. Therefore, research was reviewed in traditional and online educational settings to see if this external factor was going to affect the results of this study. In a military education setting, Bradley Barker and David Brooks and Steven W. Schmidt and Mott concluded online training was effective for both military and civilian learners.<sup>42</sup> Researchers also found both mobile learning and traditional classroom learning were effective for both mili-

tary personnel and civilians.<sup>43</sup> In a civilian university environment, Lisa T. Fall, Stephanie Kelly, and Scott Christen found no significant differences in motivation to learn between military and civilian students when taking online courses.<sup>44</sup> Starr-Glass also found no significant differences in values and concerns expressed relating to experiences in online courses between military and nonmilitary online students.<sup>45</sup>

**Data collection.** The survey instrument used in this study was the existing Military School EOCE to collect student course satisfaction data for all traditional, online, and hybrid courses. It has been used for the courses under examination since 2009. The Military School's institutional effectiveness personnel review and validate the instrument annually. There are nine Likert scaled statements in the areas of course mission accomplishment, course management, course instruction, and course value (see appendix). At the completion of each Military School course, instructors provide a link to the online EOCE for students to complete the evaluation. Traditional classroom students are asked to complete the EOCE prior to departing the classroom. Hybrid and online students are given three days to complete the EOCE online. It typically takes 10–15 minutes for a student to complete this assessment. Students are asked to rate the nine statements included as strongly agree, agree, slightly agree, slightly disagree, disagree, and strongly disagree. Each statement is followed by an open-ended question giving students an opportunity to provide narrative comments.

The Military School's institutional effectiveness personnel collect the data, assimilate the results, and provide summary reports that consist of aggregated data by statement to Military School course instructors. The information in the summary report is not traceable to individual respondents. The Military School defines a successful course as one in which:

- at least 90 percent of the respondents *strongly agree, agree, or slightly agree* that the course mission was accomplished,
- the instructor delivered the course content very effectively,
- the course was managed very effectively,
- and the course was deemed by students to be highly valuable in their professional career development.

Archival raw data, which included student numerical ratings and narrative comments, used in this evaluation study were provided by the Military School's Institutional Effectiveness office and will be made available at the request of future researchers.

**Data analysis methods.** For the quantitative portion of this study, Likert scaled student satisfaction data from 96 student evaluations were analyzed using STATDISK 11.1.0. Descriptive statistics such as mean, median, mode, standard deviation, and frequency distributions were calculated for four EOCE statements pertaining to the areas of most concern to the Military School's stakeholders: course mission accomplishment, course instruction, course management, and course value. STATDISK 11.1.0 was used to analyze data distributions and determined these data were not normally distributed. As a result, nonparametric Kruskal-Wallis analysis of the variance tests was used.<sup>46</sup> The probability level was set at 0.05, the typical value set by educational researchers.<sup>47</sup> The findings of the quantitative portion of the study addressed the first research question, which was to determine whether or not there were significant differences in student satisfaction for traditional, on-line, and hybrid versions of Course 1 and Course 2.

For the qualitative portion of the study, narrative student comments were analyzed using axial coding methods and grouping qualitative data into themes.<sup>48</sup> Data were examined initially using the categories that were of most concern to the Military School stakeholders: course mission accomplishment, course instruction, course management, and course value.

To determine validity and trustworthiness of qualitative data a peer review of the coded data was conducted.<sup>49</sup> A Military School faculty member with a doctorate and experience with using qualitative research methods completed a peer review of the coded student narrative data. This faculty member was not affiliated with the courses under examination. No additional changes were recommended by the peer reviewer.

## **Results**

### **Course 1**

In 2012, the traditional version of Course 1 was divided into two online courses. The first online portion, the Basic Skills Course (pseudonym), covered the fundamentals of leading a midlevel military organization. The second online portion, the Specialized Skills 1 Course (pseudonym), covered specific topics from the second week of the original course. Twenty-three students completed the pretransition traditional Course 1 in 2010 and the EOCE. Thirteen students completed the posttransition online Specialized Skills 1 Course in 2012 and 2013, and the EOCE. The results were combined to develop a viable sample size for analysis. Thirty-two students completed the on-

line Basic Skills Course and the EOCE in 2012. All students were from the first specialized career field under examination.

In 2013, students taking the Basic Skills EOCE were drawn from a mix of midlevel managers working in the two specialized career fields under examination. The students took the survey anonymously online and the results were aggregated to ensure anonymity. Therefore, it was not possible to determine a breakout of responses from the students by career field.

**Mission accomplishment.** Military School institutional effectiveness personnel define mission accomplishment as achieving course objectives which are contained in the course mission statement. All student survey ratings met the Military School's criteria of slightly agree or higher to the statement "Based on the mission statement above, I believe the course accomplished its mission." There were no significant differences among the three course means for student satisfaction of mission accomplishment  $H(2, N = 68) = .072, p = .96$ . Means for the three courses are shown in table 1. The p value was set at .05. The null hypothesis could not be rejected. This finding supported recent research comparing online and traditional instructional formats of a graduate nurse anesthesia course. Laura Palmer, John M. O'Donnell, Dianxu Ren, and Richard Henker found even though the online course student satisfaction mean for the accomplishment of course objectives was higher than the traditional course mean, the difference was not statistically significant.<sup>50</sup>

**Table 1. Course 1 mission accomplishment descriptive statistics**

Course	Delivery mode	<i>n</i>	<i>M</i>	<i>SD</i>
Course 1	Traditional	23	5.391	0.583
Basic Skills Course	Online	32	5.406	0.665
Specialized Skills 1 Course	Online	13	5.462	0.519

*Note:* In this table and all subsequent tables, *n* = number of students, *M* = mean, and *SD* = standard deviation.

Examination of student responses to the question "Why do you feel the course did or did not accomplish its mission?" revealed possible course features that may have contributed towards maintaining course quality across different delivery methods. Table 2 is a summary of student responses and emergent themes.



**Table 2. Course 1 mission accomplishment student responses**

Theme	Sample responses
Traditional Course 1 Relevance to job	We were taught critical elements we need as . . . leaders. This helps me to do a better job. There were some (areas) that I feel weren't relevant to us as [leaders]. Not enough meat on the actual programs we are responsible for. Provided tools on areas ... to perform the duties.
Online Basic Skills Course Relevance to job	Talked about all the important issues for a (leader). Great tools offered for new (leaders). Provided the tools and methodology to accomplish a (leader's) duties and responsibilities. It made me think differently about my job.
Interaction	Interaction with peers was great. Networking. Weekly class sessions that were interactive.
Online Specialized Skills 1 Course Instructor quality	The instructors made the difference. The instructors were great. Great instructors.

Students identified relevance to their jobs for the traditional Course 1 and online Basic Skills Course. The themes of interaction and instructor quality were evident in student comments for the online Basic Skills and Specialized Skills 1 courses. These findings were consistent with the study's theoretical framework. Mott, as cited by Wlodkowski, and Knowles, Holton, and Swanson concluded adults are more prone to choose learning opportunities relevant to their jobs.<sup>51</sup> Anderson emphasized the importance of establishing a high level of student interactions with each other and with their instructors in an online learning environment.<sup>52</sup>

**Course instruction.** All of the student survey ratings met the Military School's criteria of *slightly agree* or higher to the statement "Instruction during this course was delivered effectively." There were no significant differences among the three course means for student satisfaction of instructor effectiveness  $H(2, N = 68) = 2.674, p = .26$ . Means for the three courses are shown in table 3. The  $p$  value was set at .05. The null hypothesis could not be rejected. This finding supported prior research comparing student satisfaction means of instructor effectiveness for online and traditional instructional formats. In a recent study comparing online and traditional formats of a sociology course, Adam Driscoll, Karl Jicha, Andrea N. Hunt, Lisa Tichavsky, and Gretchen Thompson found there were no significant differences in student ratings of instructor effectiveness.<sup>53</sup> Palmer, O'Donnell, Ren, and Henker found student satisfaction ratings of instructor effectiveness did not significantly differ in a graduate nurse anesthesia course offered in online and traditional formats.<sup>54</sup> Hale, Mirakian, and Day reported student satisfaction ratings of instructor

effectiveness in a pharmacology course did not significantly differ for online and traditional course versions.<sup>55</sup>

**Table 3. Course 1 course instruction descriptive statistics**

Course	Delivery mode	<i>n</i>	<i>M</i>	<i>SD</i>
Course 1	Traditional	23	5.261	0.619
Basic Skills Course	Online	32	5.500	0.568
Specialized Skills 1 Course	Online	13	5.615	0.506

Examination of student responses to the questions “Why do you feel the instruction for this course was or was not delivered effectively,” “What were the best area(s) of instruction,” and “What area(s) of instruction do you consider to be least effective?” provided additional insight. Table 4 is a summary of the student responses.

**Table 4. Course 1 course instruction student responses**

Theme	Sample responses
Traditional Course 1	
Relevance to job	Most helpful in enabling me to do my job better. Key to our position. Best prepared briefers with...details for our duties. (Guest lecturer) failed to relate to the responsibilities of the (job). (Guest lecturer's) presentation was not applicable to the (job).
Instructor quality	All instructors were professional and knowledgeable. (Guest lecturer) was unable to answer specific questions. (Guest lecturer) was not appropriate for the topic. Insulting (guest lecturer).
Online Basic Skills Course	
Relevance to job	Important part of managing. These were the duties that new (leaders) would most benefit from. Applied directly to many of the issues I face.
Instructor quality	Instructors were always engaging and on point. Responsive to student inputs. (Instructors got) students to use critical thinking and analysis. (Instructor) was great! Enjoyed instructor. I liked the use of different instructors.
Interaction	Allowed for interaction, not only with the instructors/facilitators, but also with students. Instructors were engaging.
Online Specialized Skills 1 Course	
Instructor quality	The instructors made the difference. Strong, competent, and committed facilitators. The instructors were always available during and after the weekly webinars. The instructors were interactive with the groups. (The instructor) kept the motivation going.

The theme of instructor quality emerged in student responses for all three courses. Students also valued engaging instructors. However, the quality of guest lecturers appeared to be lacking. This finding was consistent with the study's theoretical framework and prior research. Salmon's online learning theory associated successful online course instruction with engaging instructors known as e-moderators.<sup>56</sup> Nichols found positive student perceptions of traditional and online instruction result when the teaching is done by knowledgeable, insightful, and personable instructors.<sup>57</sup>

Relevance to job and interaction were also noted multiple times in student responses. These findings supported the study's theoretical framework and prior studies that compared traditional and online instruction. Laura A. Diaz and Florentina E. Entonado reported positive student comments pertaining to interaction in both traditional and online versions graduate course.<sup>58</sup> In a study of online continuing education courses in law enforcement, students identified the lack of instructor-student interaction as the thing they disliked most in online education and why they preferred traditional instruction modes.<sup>59</sup> In Kirtman's study, students commented on the lack of peer interactions as notably different when comparing online and in-class instruction.<sup>60</sup> Lam and Bordia reported students in their study preferred more student-instructor interaction in an online class to overcome the challenge of not being collocated.<sup>61</sup>

**Course management.** All student ratings shown except one met the Military School's criteria of *slightly agree* or higher to the statement "The course was managed very effectively by the course director." There were no significant differences among the three course means for student satisfaction of course management. Means for the three courses are shown in table 5. The  $p$  value was set at .05. The differences were not significant,  $H(2, N = 68) = .605$ ,  $p = .74$ . The null hypothesis could not be rejected. This finding supports research comparing student satisfaction means of course management for online and traditional instructional formats. Driscoll, Jicha, Hunt, Tichavsky, and Thompson found student satisfaction ratings of course management did not significantly differ in a sociology course offered in online and traditional formats.<sup>62</sup> In a recent study comparing online and traditional formats of a graduate nurse anesthesia course, Palmer, O'Donnell, Ren, and Henker reported there were no significant differences in student ratings of course management.<sup>63</sup> In a continuing education course for university personnel preparing to assist visually impaired students, Dae Shik Kim, Helen Lee, and Annette Skellenger reported student satisfaction ratings of course management did not significantly differ for online and on-campus versions.<sup>64</sup>

**Table 5. Course 1 course management descriptive statistics**

Course	Delivery mode	<i>n</i>	<i>M</i>	<i>SD</i>
Course 1	Traditional	23	5.652	0.573
Basic Skills Course	Online	32	5.688	0.535
Specialized Skills 1 Course	Online	13	5.846	0.376

Table 6 summarizes student responses to the question “Why do you believe the course was or was not managed effectively by the course director?” Student support and instructor quality themes were found in the traditional Course 1 and online Basic Skills Course. Students in the online Specialized Skills 1 Course reported instructor quality as a notable course feature.

**Table 6. Course 1 course management student responses**

Theme	Sample responses
Traditional Course 1 Student support	Anytime we had an issue, they were all over it trying to get it resolved. I was very impressed by the assistance received. If you had a question or problem they were willing and ready to take care of it for you.
Online Basic Skills Course Student support	Always available to help and answer questions. Everyone was so understanding and did all they could to help us. When there was a technical issue (course director) found a way around it.
Online Specialized Skills 1 Course Instructor quality	Kept us focused and on track. Strong influence and motivator. Available all the time. Lessons were well explained and discussions were on point. Instructor made the difference.

All three themes were consistent with the study’s theoretical framework and prior research findings. Napier, Dekhane, and Smith’s research identified student support as critical to the successful transition of a traditional computer course to hybrid instruction.<sup>65</sup> Lam and Bordia similarly concluded student support was essential for online courses.<sup>66</sup> Nichols found positive student perceptions of traditional and online courses resulted when the teaching was done by knowledgeable, insightful, and personable instructors.<sup>67</sup>

**Course value.** All except one of the student survey ratings met the Military School’s criteria of *slightly agree* or higher to the statement “The education received was highly valuable to my professional career development.” There were no significant differences among the three course means for student sat-

isfaction of course value. Means for the three courses are shown in table 7. The differences were not significant,  $H(2, N = 68) = .133, p = .936$ . The null hypothesis could not be rejected. These results do not support earlier assertions based on Knowles' theory of self-direction and self-motivation in an online course setting.<sup>68</sup> However, they support prior research findings of no significant differences in student satisfaction between online and traditional courses.<sup>69</sup>

**Table 7. Course 1 course value descriptive statistics**

Course	Delivery mode	<i>n</i>	<i>M</i>	<i>SD</i>
Course 1	Traditional	23	5.522	0.511
Basic Skills Course	Online	32	5.406	0.712
Specialized Skills 1 Course	Online	13	5.462	0.519

In student responses to the EOCE question “Why do you feel the education you received was or was not highly valuable to your professional career development?” the theme of relevance to job for the traditional Course 1 and on-line Basic Skills was found. A sample of student comments is summarized in table 8.

**Table 8. Course 1 course value student responses**

Theme	Sample responses
Traditional Course 1 Relevance to job	Helps me to do my job better. Good direction to be able to guide our sections. Gave us the foundation necessary to do our jobs. Received many resources/tools to take back to workforce.
Online Basic Skills Course Relevance to job	Made me ask the right questions to learn about my (organization). Gave you the tools, tips, and tricks of the trade. Better perspective of our job.

The theme of relevance to job supported the study theoretical framework and prior studies comparing traditional and online courses. Mott, as cited by Wlodkowski, and Knowles, Holton, and Swanson theorized adults are more prone to choose learning opportunities that are relevant to their jobs.<sup>70</sup> Nichols reported education student comments from both traditional and online course students valuing the relevance of course information to teaching.<sup>71</sup> Similarly, law enforcement students who took traditional and online continu-

ing education courses valued traditional hands-on training over online education, particularly for new recruits.<sup>72</sup>

## Course 2

In 2013, the traditional Course 2 was divided into an online course and a traditional course. The first online portion, the Basic Skills Course, covered the fundamentals of leading a midlevel military organization. The second traditional portion, the Specialized Skills 2 Course (pseudonym), covered specific topics from the second week of the original course. Twelve students completed the pretransition Course 2 EOCE after completing the traditional course. One of the respondents erroneously took the evaluation after completing a different, unrelated course. Because the results were aggregated and the students took the evaluation anonymously, it was not possible to delete this respondent's results.

Twenty-three students completed the 2013 Basic Skills Course EOCE after completing the online prerequisite course. The results were from a mix of students from the two different career fields under examination. Because the results were aggregated and the students took the survey anonymously online, it was not possible to determine a breakout of responses by career field. Consequently, student narrative comments for the online Basic Skills Course were reported in both sections for completeness. Sixteen students completed the 2013 Specialized Skills 2 EOCE after completing the traditional track course. All students were from the second career field under examination.

**Mission accomplishment.** All of the student satisfaction ratings were within the Military School's standard of *slightly agree* or higher to the statement "Based on the mission statement above, I believe the course accomplished its mission." There were no significant differences among the three course means for student satisfaction with mission accomplishment. Means for the three course are shown in table 9. The differences were not significant,  $H(2, N = 51) = .892, p = .640$ . Therefore, the null hypothesis could not be rejected.

**Table 9. Course 2 mission accomplishment descriptive statistics**

Course	Delivery mode	<i>n</i>	<i>M</i>	<i>SD</i>
Course 2	Traditional	12	5.417	0.515
Basic Skills Course	Online	23	5.348	0.714
Specialized Skills 2 Course	Traditional	16	5.563	0.629

When responding to the question “Why do you feel the course did or did not accomplish its mission?” students often cited relevance to their jobs as being important in all three courses. Student comments are summarized in table 10.

**Table 10. Course 2 mission accomplishment student responses**

Theme	Sample responses
Traditional Course 2 Relevance to job	It provides an overview of (job) responsibilities. Provided information needed to complete our jobs. Time might have been better served discussing leadership.
Online Basic Skills Course Relevance to job	Great tools offered for new (leaders). Provided the tools and methodology to accomplish a (leader's) duties and responsibilities. It made me think differently about my job.
Traditional Specialized Skills 2 Course Relevance to job	Getting the leadership view of current challenges, gave me a great overview and reinforcement of my duties. Great course for someone like me that has experience in the field, but not at the (new job).

The theoretical framework was supported by this study's theme of relevance to job. Mott, as cited by Wlodkowski, and Knowles, Holton, and Swanson theorized adults are more prone to choose learning opportunities that are relevant to their jobs.<sup>73</sup>

**Course instruction.** All of the student satisfaction ratings met the Military School's standard of *slightly agree* or higher to the statement “Instruction during this course was delivered effectively.” There were no significant differences among the three course means for student satisfaction of instructor effectiveness. The means for all three course are shown in table 11. The *p* value was set at .05. The differences were not significant,  $H(2, N = 51) = .412, p = .814$ . The null hypothesis could not be rejected. These findings do not support Adams' research comparing traditional and hybrid versions of a physical therapy

course, which found significant differences when comparing student satisfaction of hybrid and traditional instructors.<sup>74</sup>

**Table 11. Course 2 course instruction descriptive statistics**

Course	Delivery mode	<i>n</i>	<i>M</i>	<i>SD</i>
Course 2	Traditional	12	5.417	0.515
Basic Skills Course	Online	23	5.478	0.593
Specialized Skills 2 Course	Traditional	16	5.563	0.512

In student responses to the question “Why do you feel the instruction for this course was or was not delivered effectively?” as shown in table 12, the themes of instructor quality were present in comments of all three courses.

**Table 12. Course 2 course instruction student responses**

Theme	Sample responses
Traditional Course 2 Instructor quality	Instructors demonstrated professionalism and appeared well versed in areas. Excellent instructors. Instructor was not a subject matter expert. (Instructor) was not knowledgeable in some areas. Good mix of presenters.
Online Basic Skills Course Instructor quality	(Instructor) was great! Enjoyed instructor. I liked the use of different instructors. Relevance to job. Important part of managing. These were the areas that new (leaders) would most benefit from. Applied directly to many of the issues I face.
Traditional Specialized Skills 2 Course Instructor quality	Presenters were well varied for subject matter. Great mix between PowerPoints, lectures, taskers. Various mediums used in delivery helped reiterate the points.

Study findings supported the theoretical framework and prior studies. Salmon’s online learning theory was supported by multiple student comments tying instructor quality to the capacity of the course to accomplish its mission.<sup>75</sup> Central to Salmon’s theory was the concept of high quality instructors who encouraged interaction in the online classroom. In a study conducted by Nichols in 2011, education students identified the importance of instructor quality.<sup>76</sup>

**Course management.** All student satisfaction ratings except one met the Military School’s standard of *slightly agree* or higher to the statement “The



course was managed very effectively by the course director.” No significant differences among the three course means for student satisfaction of course management were found. The means for all three courses are shown in table 13. The  $p$  value was set at .05. The differences were not significant,  $H(2, N = 51) = .085, p = .958$ . Therefore, the null hypothesis could not be rejected.

**Table 13. Course 2 course management descriptive statistics**

Course	Delivery mode	$n$	$M$	$SD$
Course 2	Traditional	12	5.667	0.492
Basic Skills Course	Online	23	5.652	0.573
Specialized Skills 2 Course	Traditional	16	5.625	0.500

In student responses shown in table 14 to the question “Why do you believe the course was or was not managed effectively by the course director?” the theme of student support during the online Basic Skills Course was present in the comments.

**Table 14. Course 2 course management student responses**

Theme	Sample responses
Online Basic Skills Course Student support	Always available to help and answer questions. Everyone was so understanding and did all they could to help us. When there was a technical issue (course director) found a way around it.

Study findings were consistent with prior qualitative research studies investigating student satisfaction with traditional, hybrid, and online courses. Napier, Dekhane, and Smith research identified student support as critical to the successful transition of a traditional computer course to hybrid instruction.<sup>77</sup> Lam and Bordia similarly reported student support as essential for online courses.<sup>78</sup>

**Course value.** All except one of the student satisfaction ratings shown in table 15 met the Military School’s standard of *slightly agree* or higher to the statement “The education received was highly valuable to my professional career development.” Student satisfaction means relating to students’ perceptions of the value of the course for all three courses are shown in table 15. There were no significant differences among the three course means. The  $p$  value was set at .05. The differences were not significant,  $H(2, N = 51) = 2.752, p = .253$ . The null hypothesis could not be rejected.

**Table 15. Course 2 course value descriptive statistics**

Course	Delivery mode	<i>n</i>	<i>M</i>	<i>SD</i>
Course 2	Traditional	12	5.667	0.492
Basic Skills Course	Online	23	5.304	0.712
Specialized Skills 2 Course	Traditional	16	5.688	0.519

This finding was consistent with York’s 2008 findings of no significant differences when comparing hybrid and traditional formats of a social work course.<sup>79</sup> In contrast, significant differences were found in three prior research studies that compared course student satisfaction of hybrid and traditional course formats. Linda Wiechowski and Terri L. Washburn found students’ satisfaction ratings for hybrid courses were significantly higher than traditional versions of finance and economic courses.<sup>80</sup> Cheryl Adams also reported significantly higher course student satisfaction ratings for a hybrid physical therapy course than the traditional version.<sup>81</sup> In a wellness course, Lim, Kim, Chen, and Ryder found student satisfaction was significantly higher for a format that combined online and traditional instruction when compared to the traditional version of the course.<sup>82</sup>

In student responses to the survey open-ended question “Why do you feel the education you received was or was not highly valuable to your professional career development?” the theme of relevance to job was found in all three courses as shown in table 16. These findings supported Mott, as cited by Wlodkowski, and Knowles, Holton, and Swanson, who theorized adults are more prone to choose learning opportunities that are relevant to their jobs.<sup>83</sup>

**Table 16. Course 2 course value student responses**

Theme	Sample responses
Traditional Course 2 Relevance to job	Materials reinforced practice applications utilized on a daily basis. Learned many aspects of the business I am now in. Shared (job) experiences and solutions are invaluable.
Online Basic Skills Course Relevance to job	Gave you the tools, tips, and tricks of the trade. Better perspective of our job. It helped me in building my confidence as a leader.
Traditional Specialized Skills 2 Course Relevance to job	Everything learned is applicable in the field. What I have learned I feel I can bring back to my programs and use. I honestly believe this course will guide me in running my (organization) better.

## Discussion/Conclusions

There were no significant differences in student satisfaction among the traditional, online, and hybrid versions of Course 1 and Course 2 in the areas of mission accomplishment, course management, course instruction, and course value. Thematic analysis of student narrative comments revealed possible factors that might have contributed to maintaining student satisfaction during the transitions. Table 17 summarizes the themes and course occurrences.

**Table 17. Themes by course and evaluation area**

Course	Format	Job relevance	Instructor quality	Interaction	Student support
Course 1	Traditional	MA, CI, CV	CI		CM
Basic Skills Course	Online	MA, CI, CV	CI	MA, CI	CM
Specialized Skills 1 Course	Online		MA, CI, CM		
Course 2	Traditional	MA, CV	CI		
Specialized Skills 2 Course	Traditional	MA, CV	CI		

Note: MA = Mission Accomplishment, CI = Course Instruction, CM = Course Management, CV = Course Value

Course relevance to job duties, roles, and responsibilities was the most recurrent theme across multiple courses, particularly in the mission accomplishment and course value evaluation areas. Sample trending comments from traditional and online students included “everything learned is applicable in the field,” “this helps me do a better job,” and “received many resources/tools to take back to workforce.” These findings suggest maintaining a high degree of relevance to student job responsibilities might be a factor contributing to comparable student satisfaction across different course delivery formats.

Instructor quality and interaction were recurrent themes in both course instruction and mission accomplishment areas. In particular, high instructor quality was associated with the degree to which they engaged with their students and encouraged interaction among the students. Students commented “instructors made the difference,” “instructors were engaging,” “allowed for interaction, not only with the instructors/facilitators, but also with students,” and “(instructors got) students to use critical thinking and analysis.” These findings suggest high quality instructors that encouraged interaction are key factors to maintain student satisfaction when transitioning courses from traditional to online and hybrid delivery formats.

Student support was also identified multiple times and influenced student course perceptions. Students commented positively about student support for both traditional and online learning modes “anytime we had an issue, they were all over it trying to get it resolved” and “always available to help and answer questions.” These findings suggest a robust student support function is essential for maintaining student satisfaction when transitioning courses from traditional to online instruction.

The scope of this research study was limited to two courses. There were four other Military School courses that transitioned from traditional to hybrid or online instructional formats in the same timeframe; however, the two courses under examination provided the largest sample. This delimitation was intended to minimize the impact of potential extraneous variables by keeping the courses within the same department of the Military School. The students attending both courses were from two military career fields. Extending the study to the other four courses would introduce different course content, vary the student career fields, and involve different sets of instructors.

This research study focused on analyses of two courses in one Military School department. Future research is needed across other Military School departments and courses to build research-based best practices on using various course delivery modes. Specifically, quantitative studies can continue to be conducted that focus on student satisfaction data for all Military School courses transitioning to hybrid and online delivery. Qualitative evaluations of instructor, supporting staff, and school leadership experiences for transitioning courses would provide insight into alternate perceptions of the course transitions.

Without access to continuing education courses at the Military School, military and civilians serving abroad might find it more difficult to keep pace with professional development, thereby impacting readiness and ultimately national security. Budget cuts and personnel shortages are simultaneously limiting the ability for military members and civilians to travel to the Military School to take traditional continuing education courses. Consequently, the Military School is turning to hybrid and online delivery to offer courses to military members and civilians. The study findings suggest student traditional leadership continuing education courses may successfully be transitioned to online and hybrid delivery modes when there is particular attention to incorporating job-related activities and robust interactive learning activities. Successful transitions to online and hybrid learning opportunities may allow military members and civilians to continue their professional development despite budget cuts and resource shortfalls.

## **Appendix: Military School End of Course Evaluation**

1. I believe the course accomplished its mission.

{Choose one}

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

2. Instruction during this course was delivered effectively.

{Choose one}

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

3. The course was managed very effectively by the course director.

{Choose one}

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

4. The education received was highly valuable to my professional career development.

{Choose one}

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

5. The education has given me a foundation to effectively perform in an operational or support environment.

{Choose one}

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

6. I will use this education to enhance my performance in leadership, advisory, and /or support roles.

{Choose one}

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

7. The course was intellectually stimulating.

{Choose one}

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

8. The course was supported by appropriate educational technology.

{Choose one}

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

9. The course contained current content.

{Choose one}

- ☐ Strongly Agree
- ☐ Agree
- ☐ Slightly Agree
- ☐ Slightly Disagree
- ☐ Disagree
- ☐ Strongly Disagree

10. What were the best area(s) of instruction?

{Enter answer in paragraph form}

11. What area(s) of instruction do you consider to be the least effective?

{Enter answer in paragraph form}

12. What were the course strengths? Why?

{Enter answer in paragraph form}

13. What are some possible recommended improvements for the course?

{Enter answer in paragraph form}

14. Why do you feel the course was or was not facilitated well by the course facilitator?

{Enter answer in paragraph form}

Additional Comments:

{Enter answer in paragraph form}



## Notes

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