

Going Virtual:
Implications and Costs
for Delivering Training Virtually

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Abstract

Going Virtual: Implications and Costs for Delivering Training Virtually

COVID has changed the world forever. In order to continue providing training to state employees, many divisions across the South Carolina Department of Administration adapted training to be delivered using a virtual training delivery platform to replace face-to-face training; some suspended face-to-face training as a whole. Now that all state employees are returning to the office, should training programs return to face-to-face instruction, implement a hybrid approach, or continue with virtual delivery? Specifically, this paper will focus on the SCEIS training program. What are the implications, cost analysis, changes in user satisfaction changes and in learning results comparing face-to-face data to virtual delivery data?

The Research

To begin, research was gathered on the current state of adult education professional development training: What were the trends relating to adult professional development from an industry perspective?

Secondly, a survey was sent to agency training professionals employed across the State of South Carolina to glean what they had done to address delivery of professional development for a remote workforce, as well as the training advantages and obstacles they encountered.

Then a survey was sent to state employees who had taken part in SCEIS training during 2019 and 2021 to gauge preferences relating to delivery, camera usage and COVID implications.

Additionally, cost figures were gathered and compared.

Lastly data were gathered for 2019 (pre-COVID) and 2021 (during COVID) to compare attendance, overall assessment scores, number of attempts to reach the set assessment benchmark and delivery preferences.

Findings

The research findings are presented in four sections: Training Industry, State Agency Training Programs — Training Professionals, SCEIS Training Participants/Users and Training Assessment Data.

Training Industry

Industry findings note that for many years corporate American has been steadily increasing the usage of online delivery platforms to address changing needs including changes in business models, a dispersed workforce, sustainability concerns and changes in employee needs (Barco, Future of Learning, p.3). COVID-19 has been a key accelerator for the conversion to online delivery of professional development training. A study by Barco notes that, “The move to digital and online alternatives was immediate and massive (due to COVID-19) with 41% of companies converting programs to online.” 26% of companies noted no plans to convert to online delivery and 33% noted postponing programs. (Barco, Future of Learning, p. 9). Some studies noted higher digital conversion rates up to 59% over recent years (www.etu.com).

Other research focusing on K-20 (kindergarten through graduate studies) noted issues relating to usage of cameras for synchronous training. SCEIS and other state agencies also stated concerns with learners not utilizing web cameras, noting a level of disconnect and lack of engagement. However, some K20 studies noted several concerns, ranging from equity issues to camera fatigue, that should be taken into consideration. The same study also suggested methodologies to combat these, issues

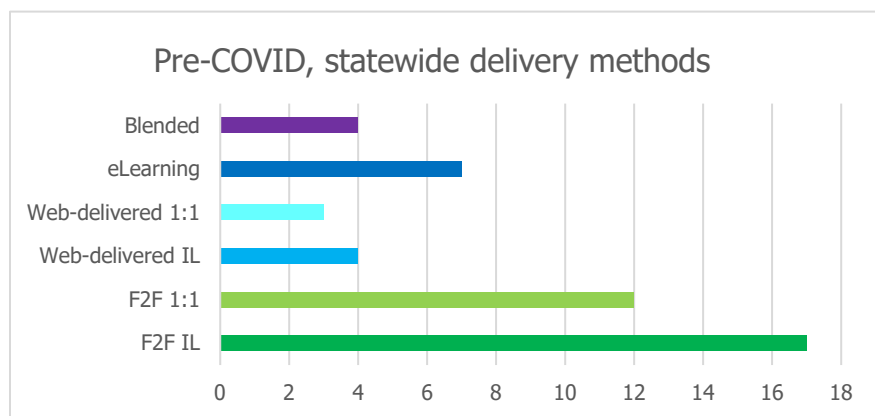
such as incorporating interactive elements, polling learners, using chat feature and incorporating breakout sessions. Conversely the same study presented some advantages for the use of webcams, including a sense of community by learners, convening a diversified group of learners and the ability for the instructor to better gauge their audience (Educause Review, Dear Professors: Don't Let Student Webcams Trick You, p. 1-12).

Additionally, a similar study by Digital Workforce focusing on the usage of webcams sided for the use of webcams with some adjustments to usage like the use of virtual backgrounds, minimizing the viewer size and incorporating interaction. (Torchia, *Pros and cons of requiring students to turn on their cameras*)

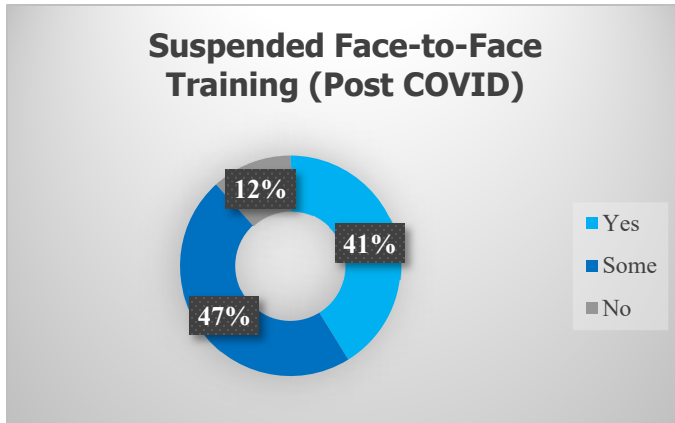
State Agency Training Programs – Training Professionals

A survey, "COVID's Effects on Training Delivery" (Attachment A), was sent to twenty-seven (27) training professionals representing twenty-seven (27) unique agencies with established training programs. Seventeen (17) of twenty-seven (27) surveys were completed, for a high return rate of 59%.

We began the survey by establishing a baseline for the types of training delivery methods used prior to COVID. 100% of

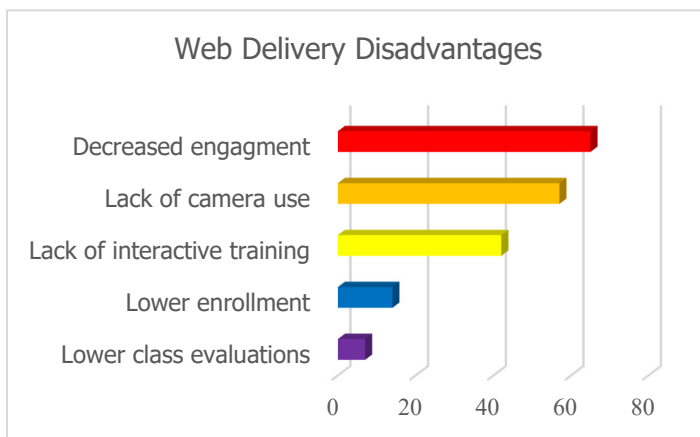


respondents reported face-to-face training delivery prior to COVID, with 40% delivering



eLearning courses and 20% using some form of web delivery. Since COVID, 41% of respondents suspended face-to-face training entirely and 47% suspended some. 100% of respondents also stated that

they were using a web delivery tool to continue training. 30% of respondents noted that additional cost had been incurred ranging from \$3,000 for an individual agency to \$300,000 for state-wide delivery.



The survey then asked about advantages and disadvantages encountered in using a web delivery tool. The top two disadvantages of decreased engagement and lack of camera use by participants were

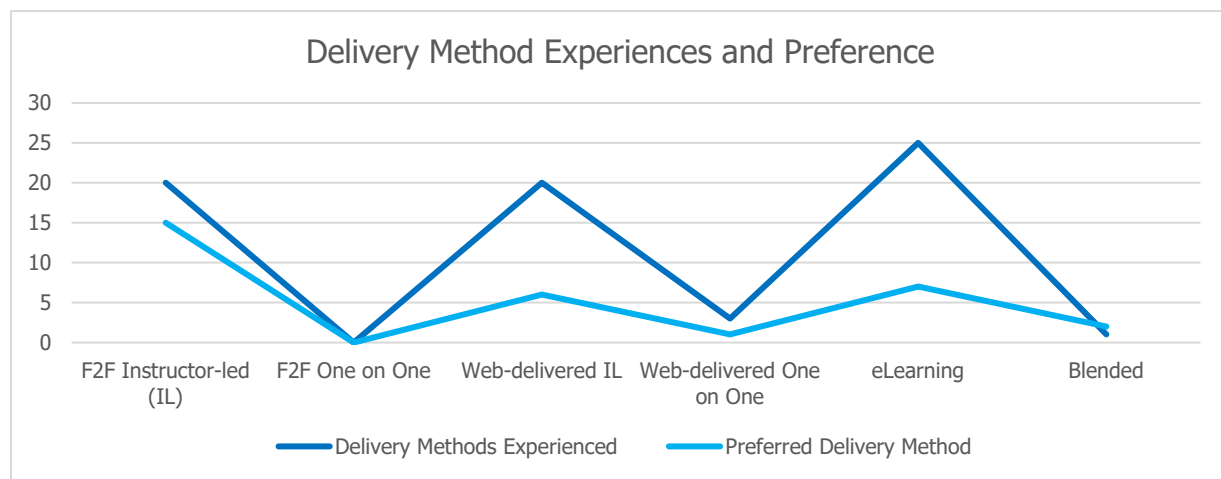
64% and 57% respectively, a direct connection to training industry trends. 40% noted the inability to provide hands-on interactive training as a disadvantage. As for advantages, 90% noted no travel expense and 70% noted less time away from the office as advantages to web delivery.

Lastly, all respondents shared that their agencies would entirely or partially return to face-face delivery.

SCEIS Training Program – Participants/Users

A survey, “Users’ Experience with COVID’s Effects on Training” (Attachment B), was distributed to one-hundred forty-three (143) SCEIS training participants (2019 and 2021) with thirty-one (31) responding, yielding a return rate of 22.5%.

The survey began with asking users of SCEIS training what training delivery methods had they experienced and then, with SCEIS training in mind what training delivery method they preferred. Comparing the answers for the two questions, a similarity in percentages was noted. The gaps between peaks for preferred delivery method was less significant but delivery method experienced, and preferred overall percentage were quite close. For SCEIS training, the preferred delivery method was face-to-face instructor-led delivery. The eLearning method was somewhat less preferred, followed closely by web-delivered instructor-led.



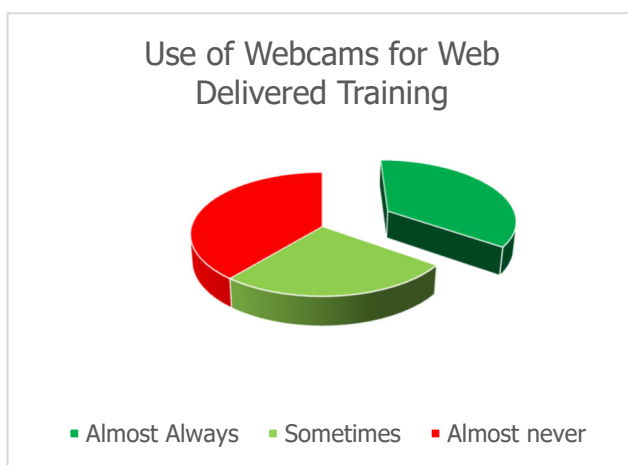
As a follow-up question the survey delved deeper, asking users why they preferred a particular method of delivery for SCEIS Training. For those users preferring face-to-face instructor-led training, the number one reason noted for this preference was more interaction with other users and the instructor. This was followed closely by

hands-on interactive learning utilizing the training environments (The training environment is not accessible virtually.) Many of these users appeared to have a kinesthetic style of learning. For those preferring web-delivered instructor-led or eLearning they noted convenience and the ability to move ahead of the group.

The next question asked if they felt that instructor-led web-delivered instruction was as effective as instructor-led face-to-face instruction. 55% felt that web-delivered was not as effective, and 45% responded that it was just as effective.

As a follow-up question the survey asked the users why they felt that web-delivered instruction (eLearning) was or was not as effective as instructor-led. As a whole, the open-ended responses slanted toward instructor-led training being more effective. Responses largely noted the ability to interact with instructors and participants by far leading to a sense of community. The ability to perform interactive hands-on exercises (using SCEIS' training environment) was also noted repeatedly.

One of the training industry trends noted issues with users using their web



cameras. The next two questions addressed the use of webcams in web-delivered training. In response to the question, "Do you use your camera throughout web-delivered training?" 35% responded almost always, 26% responded sometimes and 39% noted almost never.

This is very different from what SCEIS training experienced with 80% or more of users

not utilizing their webcam during web-delivered instructor-led training. Reasoning for sometimes or almost never using a camera ran the gamut from personal preferences/feeling awkward to not necessary to multi-tasking. A few noted the lack of a webcam (SCEIS informs all registered users that a webcam is required.)

The survey then inquired about the impacts of COVID-19 as it relates to feeling comfortable with a return to face-to-face training and what measures would make them feel more comfortable in participating in face-to-face instruction. 70% responded that they felt comfortable returning to face-to-face instructions. Spaced-out seating (68%), mandatory masks (65%) and additional cleaning measures (61%) were the top three ways to increase levels of comfort. Respondents also noted the need for plexiglass shields for the instructor (19%), equipment covers (29%) and mandatory temperature checks. A few respondents noted that nothing would make them feel comfortable returning to face-to-face instruction (13%).

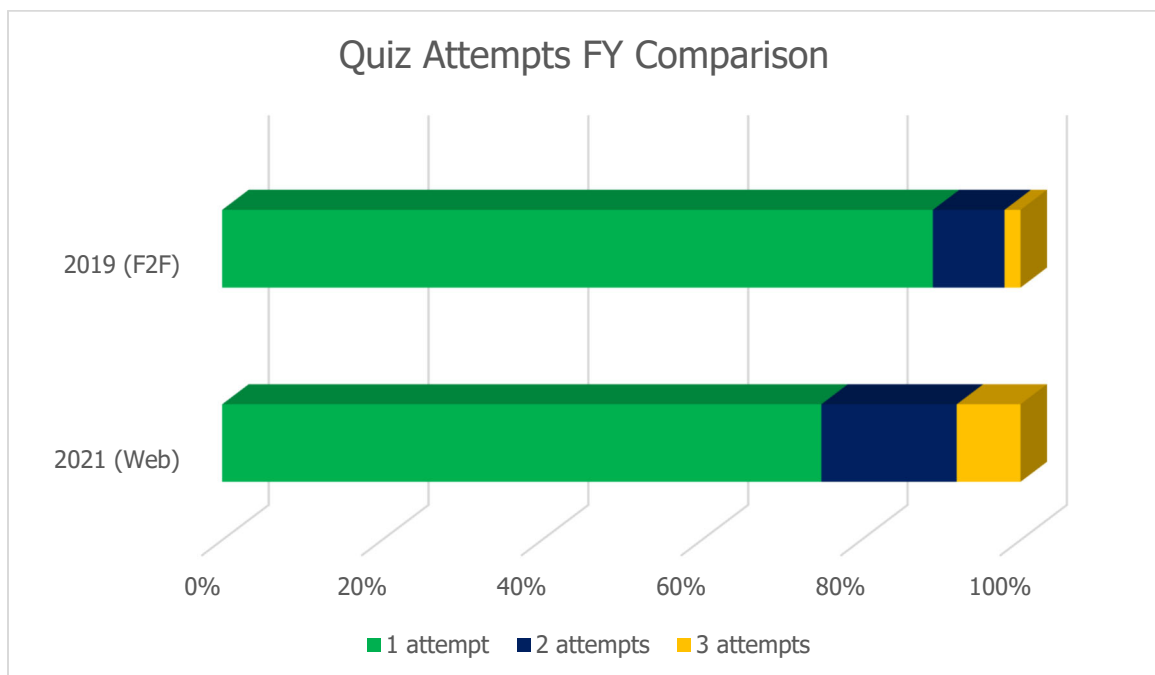
SCEIS Training Assessment Data

The assessment data gathered focused on HR courses, as this functional area has a common SCEIS training instructor, content is stable and teaching methodologies are consistent. Specifically, assessment data were gathered for FY2019, when all classes were face-to-face instructor-led training, compared to assessment data for FY2021 when all classes were web delivered instructor-led training (Attachment C).

All assessment questions were the same per course and all quizzes were taken via MySCLearning, the state's chosen learning management system. The benchmark score is 70.

In 2019 and 2021, 198 and 127 course assessment quizzes were taken respectively. The overall average score for all seven (7) courses in FY2019 was 91.1. The average score in 2021 was 86.4, reflecting an overall decrease when SCEIS training is conducted via web-delivery.

The users were able to take the assessment quiz as many times as needed to reach the set benchmark. The graphic shows that although a majority of users reached the benchmark on the first attempt, for face-face-face instructor-led classes, second and third attempts were 9% and 2%. For web-delivered instructor-led classes, second and third attempts increased to 17% and 7%. In comparison, when using web delivery, the overall quiz score decreased by 5 points and additional attempts increased from 11% to 25%.



Cost analysis

A number of tangible costs for SCEIS training including instructor costs, hosting costs, training room costs, web-delivery platform costs and participant travel costs were gathered and divided into face-to-face training and web-delivered training. A few factors need to be shared regarding costs.

1. The SCEIS Training Room physical location is part of a multi-year property lease and is the same for either delivery. The origination site for web-delivery uses this same physical location.

2. Computer costs overall would decrease due to maintaining four computers for web-delivery versus 26 computers for face-to-face full-capacity courses. All courses would still originate from SCEIS, 1628 Browning Road.

3. Instructor costs remain the same for either delivery method.

4. Web-hosting cost would be incurred for web-delivery of instructor-led courses.

5. A web-delivery platform cost was difficult to determine as the web-delivery platform was purchased for all training departments within the Department of Administration.

6. Few users travel more than 30 miles to attend face-to-face instruction. Any travel expense below 30 miles one-way is not reimbursed.

In the short-term, it cost SCEIS \$4,036.00 more to deliver HR courses online. If the SCEIS Training Room were not under a lease agreement the savings would have been approximately 75% of leasing the training room. SCEIS training would still need an onsite location (due to bandwidth concerns) to originate web-delivered courses.

This would result in a cost savings for web-delivery of \$5,134.54. It should also be noted that the SCEIS Training Room is used for other testing needs by the SCEIS technical teams and therefore this cost would not be reduced. SCEIS training would use a smaller room that is under the current lease plan.

	2019	2021
SCEIS Training Room	12,254.00	12,254.00
Computer maintenance	2,542.20	635.55
Instructor costs	3,366.00	3,366.00
Web host costs	0.00	2,943.60
Web-delivery platform	0.00	3,000.01
User travel costs	0.00	0.00
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Total	18,162.20	22,199.16
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Differential		4,036.96

Implementation Plan and Evaluation

Although the corporate training world is moving towards more comprehensive web-delivered training, given the overall data analysis, SCEIS Training will return to face-to-face training in 2022. The data showed that for SCEIS technical training, users preferred the use of the SCEIS training environment and face-to-face instruction. Additionally, overall assessments scores and attempts to reach the benchmark when using web-delivery marginally decreased. The cost differential between the two delivery methods was negligible. Since SCEIS was delivering SCEIS training face-to-face prior to COVID this transition back is minimal. Prior face-to-face classes within MySCLearning will be reactivated and web-delivery versions will be disabled for registration. For the lead HR trainer, the transition is minimal relating to content conversion. However, SCEIS will keep some interactive exercises and engagement polls as part of the overall instruction. This return to face-to-face will also allow the web host to concentrate on other projects. Key stakeholders (SCEIS users) will be notified of the return to face-to-face instruction via a number of avenues including the HR Advisory Meeting, the Admin Connect newsletter and SCEIS updates via direct email listservs and the SCEIS website. SCEIS will continue to monitor assessment scores, attempts to reach the set assessment benchmark and attendance rates.

Measures will be implemented to ensure the safety and health of users and instructors with COVID-19 protocols in mind. Face shields will be worn by instructors, face masks will be highly encouraged for all users, mouse and keyboard covers will be used, hand sanitizer provided, deep cleaning performed between classes and the

maximum enrollment cap will go from 24 users to 12 users which allows for social distancing.

The key influencer that no one can control is the continued effects of COVID-19. If state employees return to remote work or new COVID guidelines are recommended, SCEIS may be forced to return to web-delivered instruction.

Summary and Recommendations

In a study by the University of Tennessee focusing on online instruction in a continuing professional education setting their analysis yielded similar results. They noted, "Data analysis indicate no significant difference between effectiveness of delivery methods." Additionally, it stated, "Although most participants in the study say they prefer traditional instruction, the major feel that online education (OE) is an appropriate delivery method for professional development..." (Donovan, *The New Modern Practice of Adult Education*, p. 227) In this study the same conclusions were found. There was minimal difference in assessment scores and attempts across delivery platforms and cost differentials were negligible. The delivery method for SCEIS training preferred by previous learners slanted to face-to-face delivery.

The huge influencing factor that cannot be controlled is COVID-19. Additionally, politics and the push to return to face-to-face instruction are also factors.

In conclusion, when possible, SCEIS should return to delivering instruction in face-to-face instructor-led classes and utilize the training environment. But we should learn from some of the adult pedagogy incorporated in web-delivered training and use those to enrich face-to-face instruction and interaction.

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