

Faculty Training and Approach to Online Education Is There a Connection?

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November, 2015

Summary: *This study examines faculty attitudes towards online education. It uses a survey instrument to track attitudes for faculty at three points in time. First, faculty members take an original survey prior to taking an online training course. Second, participants are polled following the completion of the course. And third, they are again queried with the same survey after having taught an online course. Faculty attitudes towards student learning do noticeably appear more favorable throughout the process, as does the understanding and usefulness of online class dynamics. Results on faculty experiences, however, are quite mixed. With respect to the use and usability of technology tools, there is a major shift in attitudes. On the other hand, faculty attitudes towards the pedagogy of online learning do not change appreciably.*

Background

Surveys by Gallup and Inside Higher Ed in 2014 on faculty attitudes towards online learning reported the following findings among faculty members and school administrators.¹

“Faculty who have taught an online course seem more optimistic about the quality of online learning than are their counterparts who have never done so. Faculty who have taught an online course are likelier than their peers who have never done so to strongly agree that online courses can achieve student learning outcomes that are equivalent to in-person courses at any institution.”

The report also found that those who have experienced teaching online, and presumably were trained to do so, have quite different attitudes than those who have not. A recently-released 2015 update confirms and adds to these findings.²

These takeaways suggest that the evolution of online learning at higher education institutions is still underway. Additionally, the importance of training faculty is key to the success of online programs. But which parts of training are important in building effective online classes and institutional programs?

This study questions whether faculty views on the value of distance education change after they have been trained, and again after they have taught online. It further explores attitudes of teaching and learning in an online environment through a series of sequential surveys.

works cited

1

Scott Jaschik and Doug Lederman, “Faculty Attitudes on Technology: A Study by Gallup and Inside Higher Ed”, *Inside Higher Ed*, 2014, p. 9.

2

Carl Straumsheim, Scott Jaschik and Doug Lederman, “Faculty Attitudes on Technology: A Study by Gallup and Inside Higher Ed”, *Inside Higher Ed*, 2015, pp. 5-6.



Ten Takeaways About Online Education and Higher Learning

1. Only 9 percent of faculty members strongly agree that online courses “can achieve student learning outcomes that are at least equivalent to those of in person courses.” Administrators are much more likely (36 percent) to strongly agree.
2. There is general agreement that an online course or program “provides meaningful interaction between students and instructors” (80 percent for faculty, 89 percent for administrators).
3. “Less than half of faculty and technology administrators strongly agree that their institution offer instructors strong support for online learning.”
4. “About one in three professors say they have taught an online course, with some variation across position type.”
5. “83 percent of faculty say that online courses are of lower quality than in-person courses with respect to interaction with students during class.”
6. “Only 37 percent of instructors agree that digital humanities has improved their teaching.”
7. “Nearly half of faculty members (48 percent) believe improving the educational experience for students by introducing more active learning in the course is a very important reason for converting face-to-face courses to blended or hybrid courses.”
8. “Four in 10 faculty members have taught a blended or hybrid course, one that contains significant in-person and online components.”
9. “Professors mostly believe that institutions should produce their own online degree programs (78 percent) as opposed to working with online management companies to produce the programs.”
10. “From a list of 11 indicators to assess a quality online education, faculty members and technology administrators are both most likely to say interaction between students and faculty is very important.”

This research uses attitudinal surveys to evaluate faculty opinions, dispositions, and beliefs about online learning. It examines the sequential stages of training and teaching. The purpose of this research is to determine if attitudes change over time as a result of taking a training course on how to teach online and, later, after actually teaching an online course. American University faculty members are expected to complete a training course on the technology and pedagogy of online education before teaching a virtual course.

Faculty enrolled in the spring 2015 training course completed three surveys. The same survey was administered each time. The three time intervals represent different points in their introduction to or immersion within online learning.

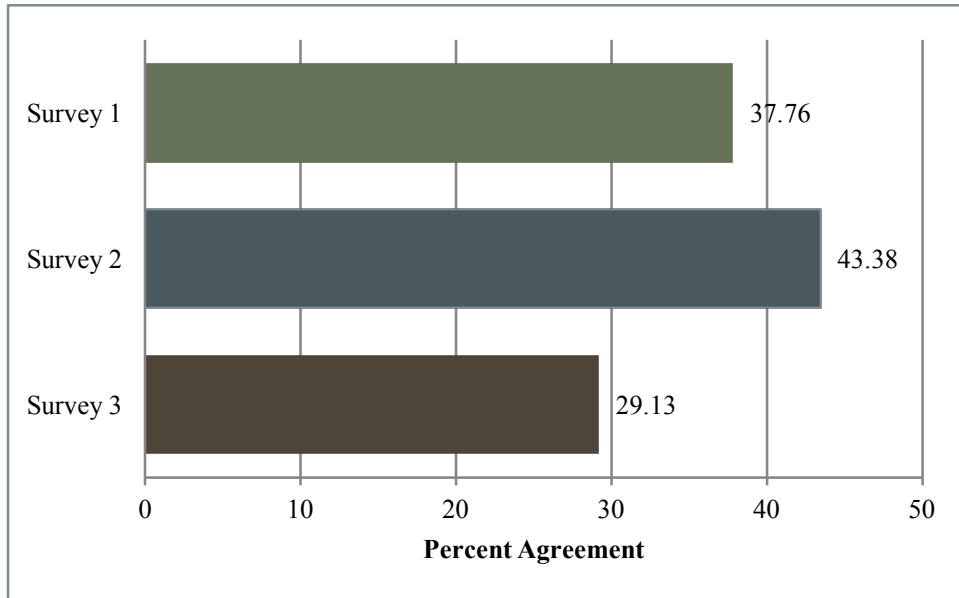
- Survey 1: Prior to taking the training class
- Survey 2: After the training was complete
- Survey 3: Following the completion of teaching an online course

Thirteen questions’ possible means were used to evaluate faculty attitudes towards distance learning and how views changed with successive stages of involvement in online curricula. From an original pool of more than 40 participants, however, there was attrition over time. Faculty dropped the course due to a variety of reasons: some lacked the time to take the course, some lost interest in the venue, and some who had intended to teach changed their plans. Among those who planned to teach online during the summer of 2015, there were some unable to do so because of enrollment or other outside issues. Additionally, other faculty in the training course chose not to take part in the voluntary survey.

For these reasons, Survey 1 (prior to training) had 26 respondents, Survey 2 (after training) had 21, and Survey 3 (after teaching an online course) had only 8. This sharp drop-off in responses, and the absolute total of them, does raise questions about the validity of the results in representing a population of faculty. For this reason, it is best to regard these findings as suggestive in nature but not particularly reliable in a statistical sense.

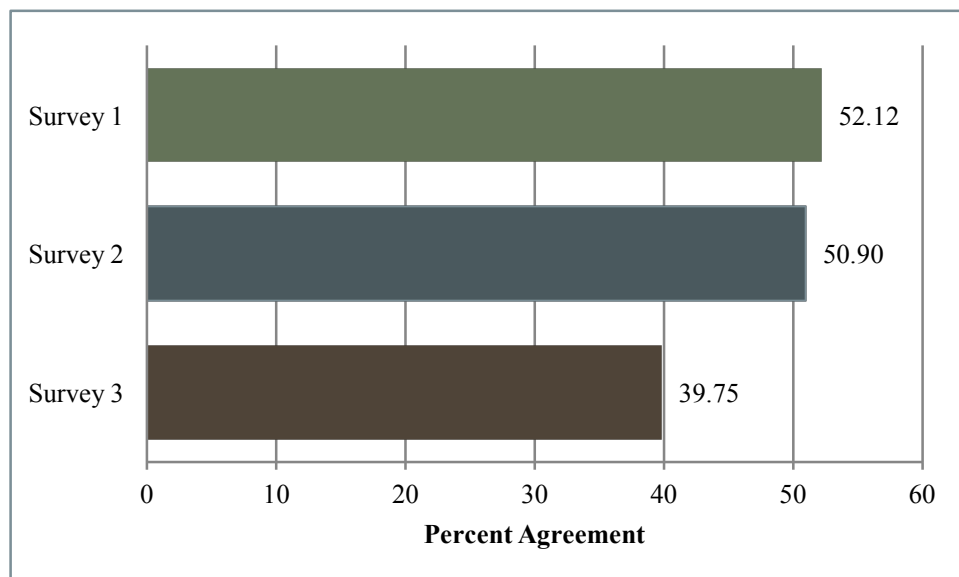
There were 13 questions administered in each survey. Respondents were asked to read a statement and indicate on a scale of 1 to 100 their degree of agreement with the statement (the x axis). A score of 100 would represent complete agreement; a score of 0 would represent no agreement. The graphs that follow summarize the averages from the surveys. The scores for each question in the survey are compared between the three time intervals (the y axis), with Survey 3 being the final and Survey 1 the first. The scores shown are the averages for the respondents.

Q1. “Distance education is not a viable alternative for learning compared to face-to-face environments.”



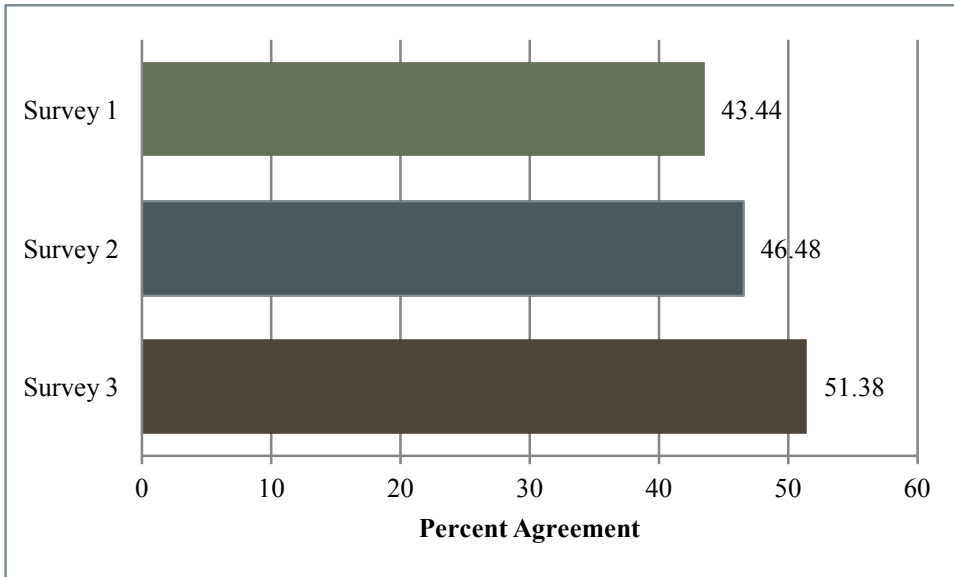
At the onset, only one-third of the faculty felt distance education was a viable teaching environment compared to face-to-face occasions. After the training, this average rose to nearly one-half. Surprisingly, after teaching online the average fell to only one-quarter of the total. This question is one of three in which trends did not fall consistently in the same direction. Interestingly, skepticism in online learning as a learning milieu actually rose after training, before falling significantly after experience.

Q2. “There is less student-teacher interaction in distance education environments.”



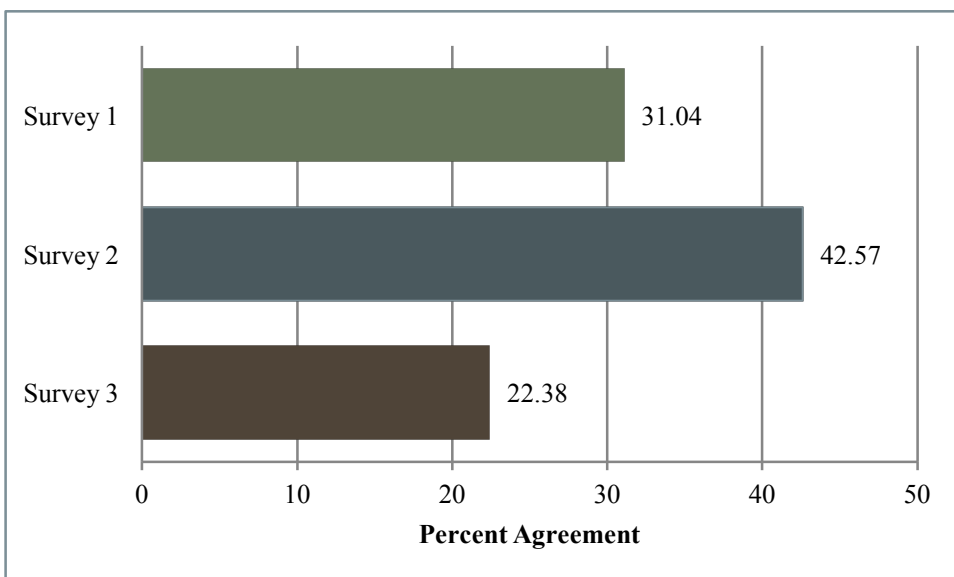
One-half of the faculty in the first survey felt there would be less student-faculty interaction and even after the training this average remained about the same. However, after teaching online, this average fell to only about 40 percent agreement. Often, faculty discovered new ways to engage students in an online environment or adapted techniques to do so. Different faculty used different techniques for reaching their students.

Q3. “The time commitment for developing a distance education courses is comparable to those in face-to-face classes.”



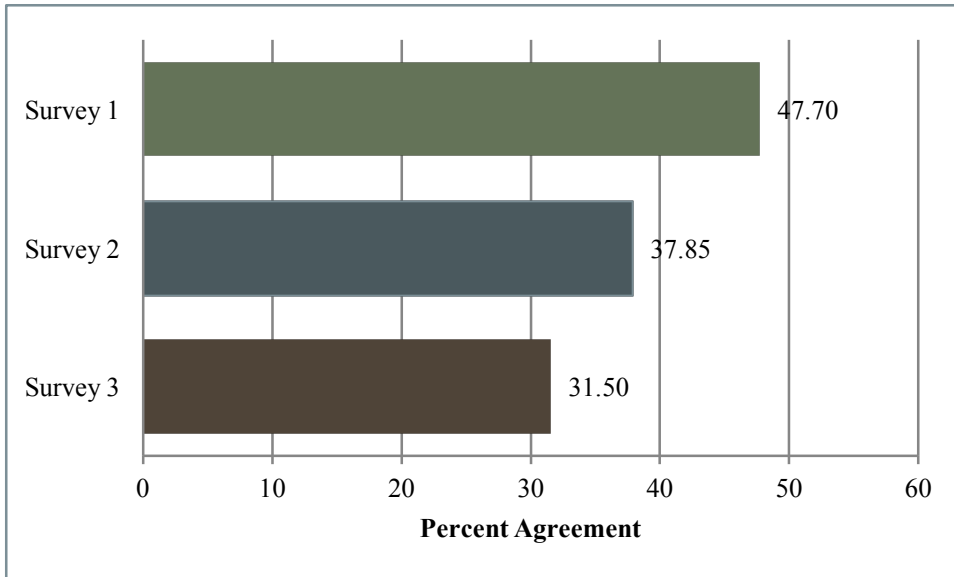
When faculty began the training course, about 43 percent believed the time commitment to course preparation would be roughly comparable to a face-to-face class. This feeling changed over time. After the training, and having become more engaged in creating an online course, their fears of a higher level of effort slightly declined (46 percent thought the time commitment was comparable). Following teaching a course online, the comparability of the two modes of teaching rose to 51 percent. At each survey stage, the estimates for time commitment in an online course appeared more in-line with a traditional course.

Q4. “Teaching online will have no impact on my face-to-face courses and instruction.”



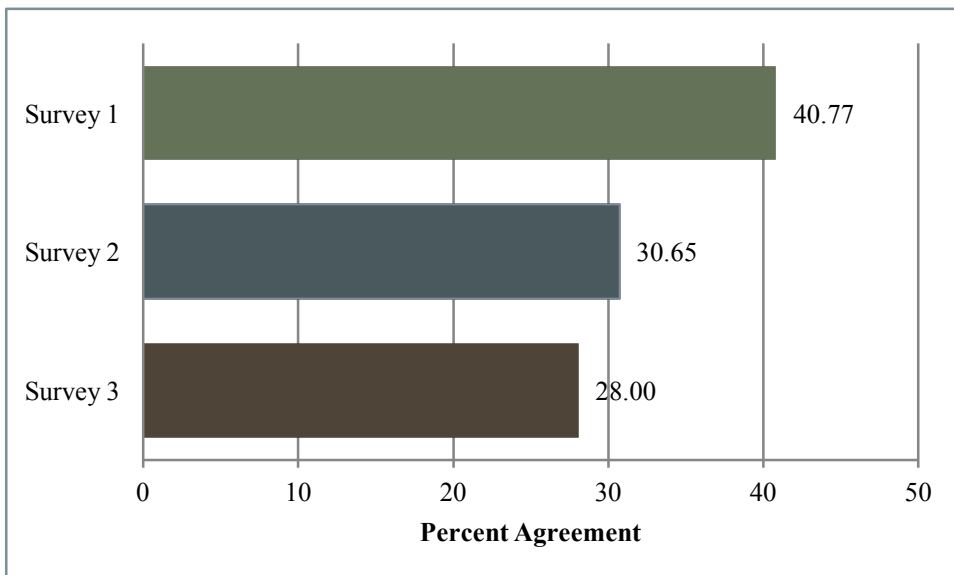
Views on the relationship between training for online teaching and its impact on traditional instruction rose and fell over time. At first, about one-third agreed with the statement, meaning 70 percent believed that there would be some osmosis between the two teaching venues. After training, that score fell so that only about 60 percent felt it would impact their face-to-face teaching. But after teaching online, there was general agreement that they had learned some important skills (almost 80 percent). Attitudes on this statement differed markedly by stage. As in Question #1, it was rare in the responses to see a rise and fall in attitudes. Nonetheless, it is clear that teaching an online class had a stronger impact on attitudes that just being trained to do so.

Q5. “Students learn less in distance education courses.”



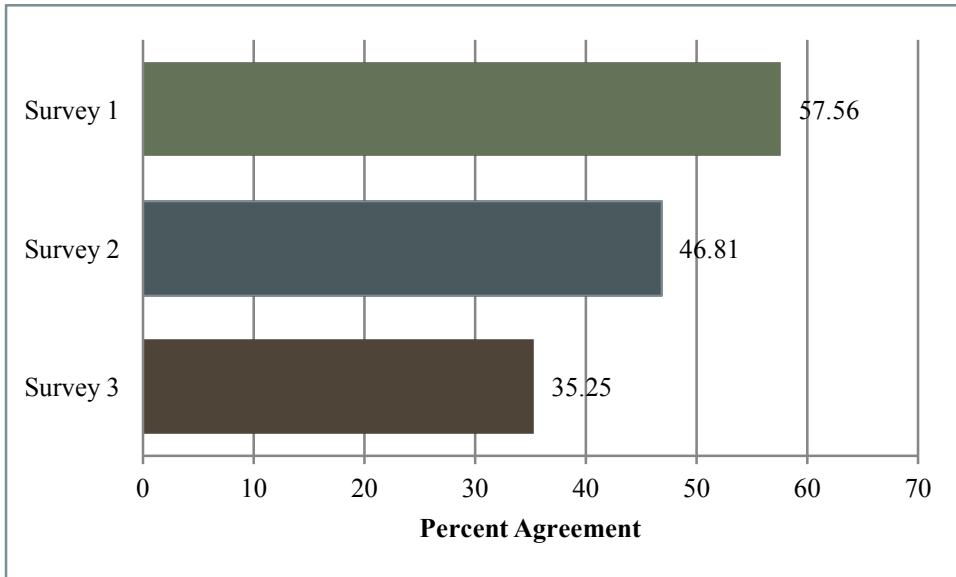
One of the great fears about online learning is that students will be less engaged because of fewer interactions, and as a result, learn less. The results here are quite clear that faculty gradually saw there can be effective learning in distance courses. At the start, almost one-half believed students would learn less, but by the end this has fallen to 32 percent. This finding represented a high degree of attitudinal change.

Q6. “Grades will be lower for students in a distance education class.”



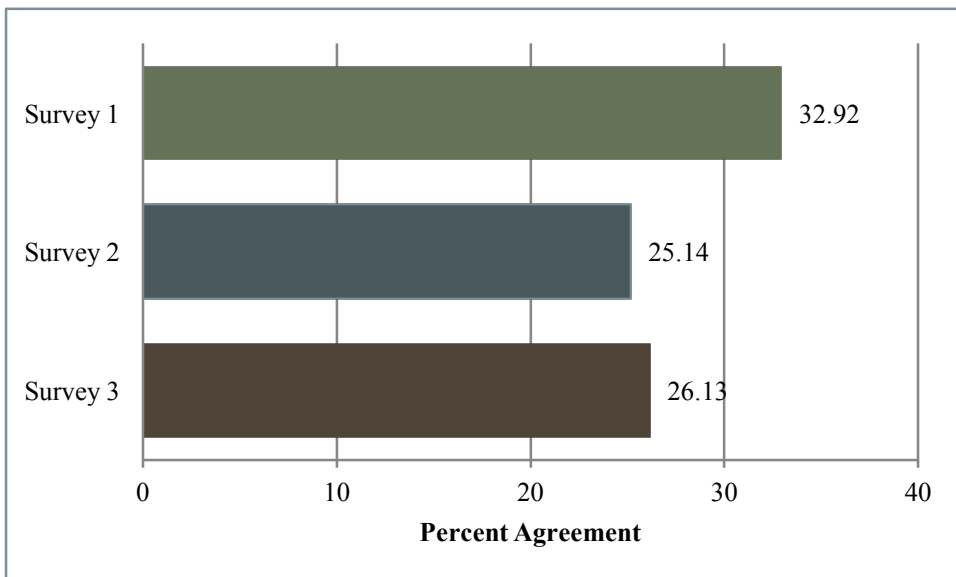
Faculty not only fear students learn less online, but also that they receive lower grades in the process. In Survey 1, about 40 percent believed students would get lower grades online, but by the end of training this fell to 30 percent. And, after having taught online, that attitude fell further to 28 percent. (However, an earlier study of grades in online course at American University showed that there were lower grades. This can be attributed to a higher rate of bi-model grade distribution, an increase in the rates of very low grades, and academic/administrative failures.)

Q7. “My lectures cannot be replaced by technology tools.”



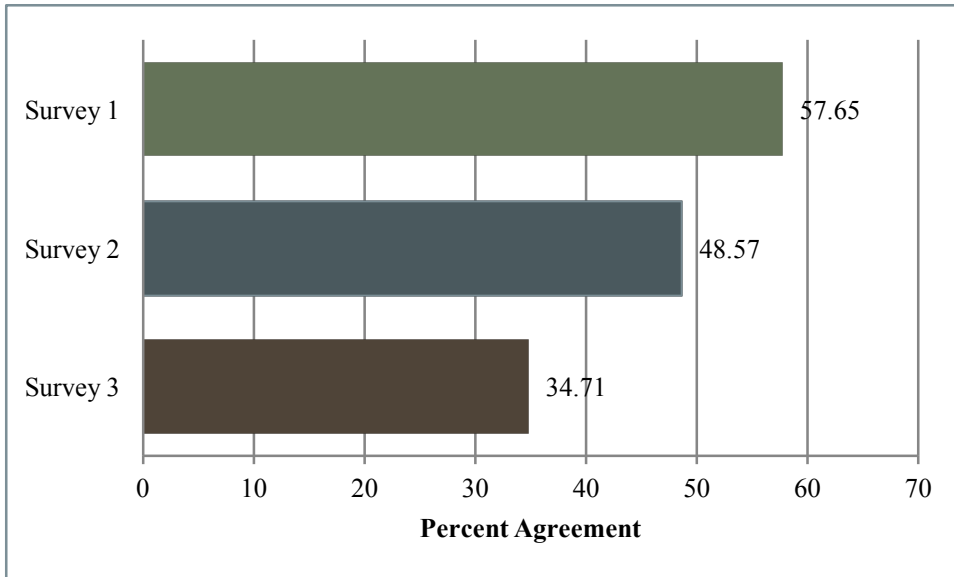
Faculty started with the belief that their lectures could not be replaced online (almost 58 percent). However, they came to acknowledge that their in-person lectures could be effectively replaced in an online environment. After the training, about 47 percent believed that lectures could be replaced online, but this substantially shrank after teaching online. In the end, only about one-third felt they could not replace their traditional lectures with other tools. This may represent the utilization of lecture-capture tools or, perhaps, the introduction of more active and authentic teaching methods.

Q8. “There is no way for me to know if my students did the reading in a distance education class.”



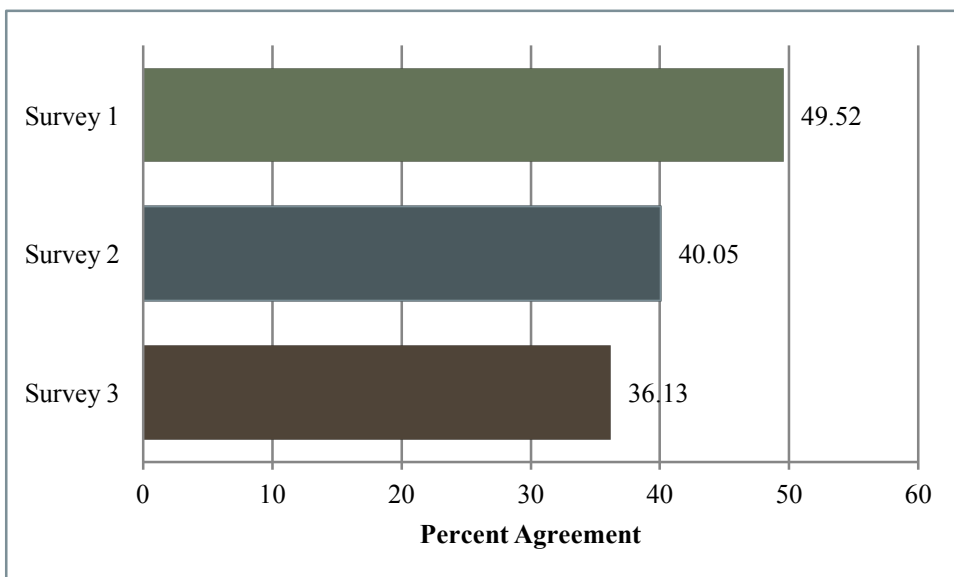
The question of holding students accountable for readings, and determining that they had read materials, did not change much through the process other than a slight dip. Faculty generally did believe they could discern whether students had read the materials (about 68 percent to start), and having taught online this rose to about 75 percent. Perhaps this phenomenon reflects a general inability in any class to determine whether students actually engage the course readings. This was the final question in which trends did not consistently fall in one direction. The indicator dropped after training but rose slightly after teaching a course.

Q9. “There is a high degree of depersonalization and anomie among students and teachers in distance education.”



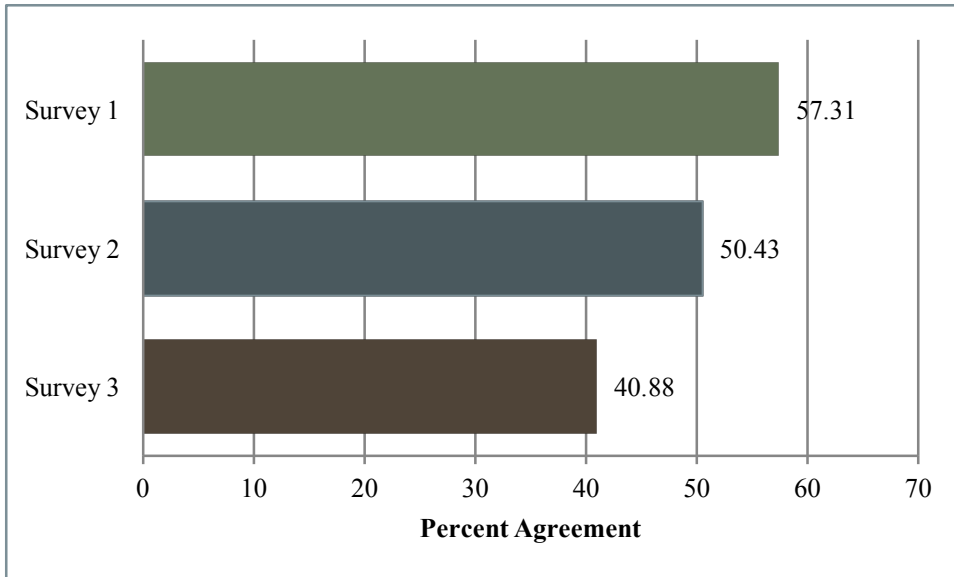
A perception of depersonalization has historically permeated many forms of distance learning, including correspondence, radio, and television courses. The feeling that online courses were highly impersonal began as relatively high (about 58 percent) in Survey 1, but by the time a course had been completed, this level had only fallen to about one-third. This was among the largest changes in the 13 questions.

Q10. “There is more academic dishonesty (cheating, plagiarism) in online courses.”



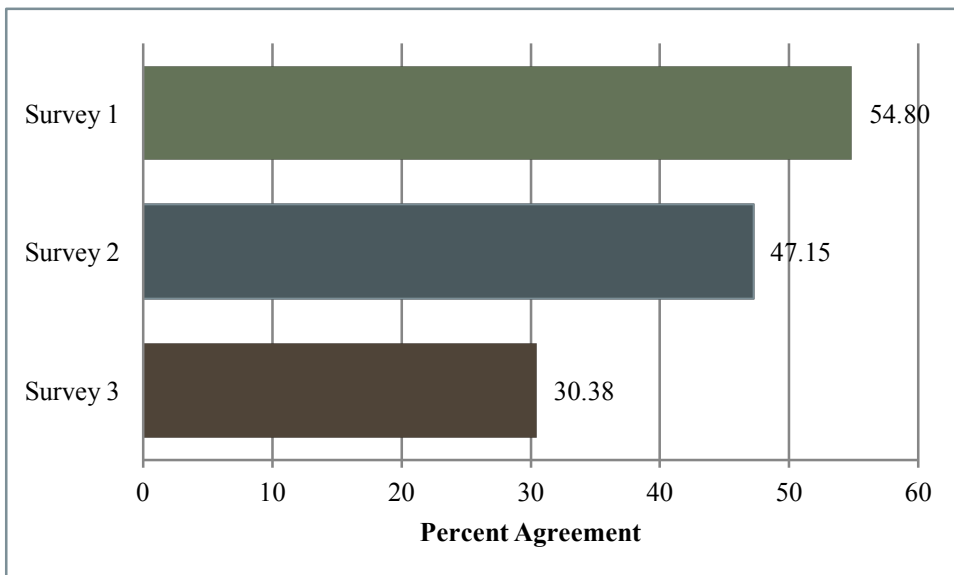
Despite the widespread view that cheating occurs often in online courses, most peer-reviewed research finds that academic dishonesty is no more rampant in virtual classes (and some studies suggest that face-to-face classes incur higher rates of plagiarism). Accordingly, the belief of higher online cheating rates among those surveyed fell from a high of one-half at the beginning of training. After having taught online, only about one-third felt that academic dishonesty occurred more often in the online environment.

Q11. “Student discussions in distance education courses will seem impersonal and lack feeling compared to face-to-face classes.”



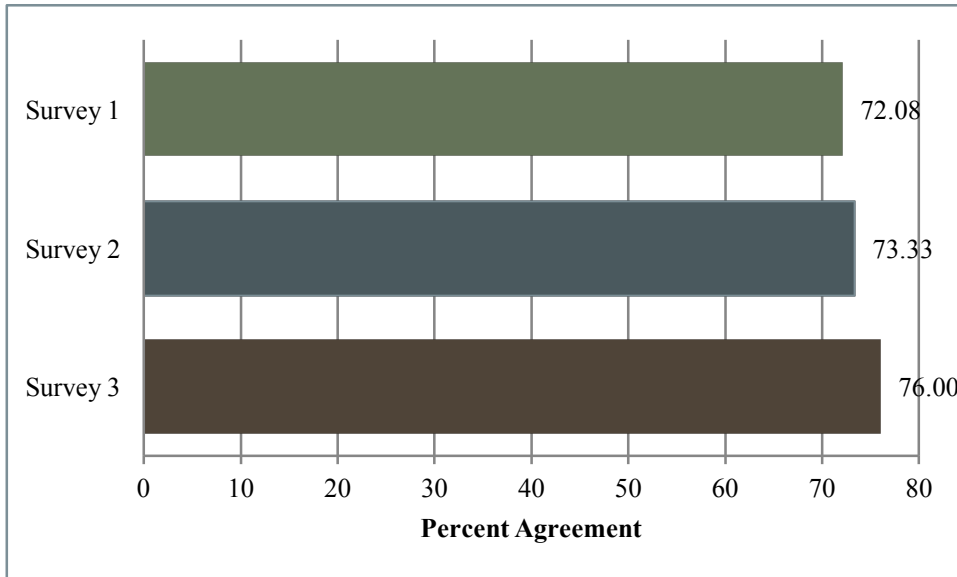
Faculty are often concerned about the role and value of discussions in an online educational environment. The value of meaningful student discussions had, at first, little support (57 percent) among instructors. This share dropped to about 50 percent after the training and to 41 percent after teaching online.

Q12. “The technology of distance education courses is difficult to manage.”



Prior to completing the training course, many faculty members were concerned about their own ability to learn the technology required to facilitate online classes. Over time, many instructors found that the real challenge lies within learning new forms of pedagogy – and that utilizing technology tools can be as simple or complicated as desired. Participant perception of the difficulty presented by utilizing technology in an online class fell substantially after being trained, and again after using that training to teach a course (55 percent to 30 percent).

Q13. “Good teaching principles will carry over from face-to-face to distance education courses.”



Faculty generally believed that good teaching skills were transferable between the online and face-to-face environments. Over time, this belief rose slightly from 72 percent to 76 percent. (Nonetheless, in some instances faculty scores on student satisfaction differ markedly between face-to-face and online courses.)

Analysis

The survey questions and responses can be grouped by three salient issues in the classroom: student learning, class dynamics, and faculty experience. In the comparisons that follow, a positive (+) scoring change indicates that the attitude towards the online question improved between Survey 1 and Survey 3. A negative scoring change, however, shows a decline in that attitude. Please note: each statement’s context is integral to interpreting the findings. Thus, it is more significant to examine the magnitude of change rather than the direction (negative or positive).

Analysis

The study's questions can be grouped into three distinct types for analysis.

Three questions related to student learning in an online class. This table (right) shows that expectations and attitudes about student learning did change significantly for participants. As a result of the process, all responses improved in the range of 8.7 to 16.2 in terms of agreement with the proposed statement. The average score change on questions regarding students shifted by 12.5.

Student Learning Question	Scoring Changes (Percent Agreement)
Q1. "Distance education is not a viable alternative for learning compared to face-to-face environments."	+8.7
Q5. "Students learn less in distance education courses."	+16.2
Q6. "Grades will be lower for students in a distance education class."	+12.7

Class Dynamics Question	Scoring Changes (Percent Agreement)
Q2. "There is less student-teacher interaction in distance education environments."	+12.3
Q9. "There is a high degree of depersonalization and anomie among students and teachers in distance education."	+13.0
Q10. "There is more academic dishonesty (cheating, plagiarism) in online courses."	+13.4
Q11. "Student discussions in distance education courses will seem impersonal and lack feeling compared to face-to-face classes."	-16.4

There was also significant change of the same magnitude for the class dynamics questions. The four questions related to the classroom experience are detailed (left). Response change rates range from a 12.3 to 16.4, illustrating much less variation compared to the student learning instances. The average, however, was quite similar, showing an attitudinal change of 13.8.

Six questions, slightly less than half of the total survey, related to faculty experience. Here we see a highly bimodal distribution. The score changes ranged from a low of 3.9 to a high of 22.3. But at the low end, four scores clustered between 3.9 and 9.4.

The statements (right) concerned the fundamentals of the educational experience, with results that showed these attitudes did not significantly shift. At the high end are two scores of 21.4 and 22.3. These two questions studied the replacement of in-person lectures with technology tools and the mastery of the technology. Hence, it is likely that the online experience shifted faculty attitudes towards the use of technology much more than their pedagogical attitudes. The average shift was 12 points, again in line with the findings from student learning and the class dynamics questions.

Faculty Experience Question	Scoring Changes (Percent Agreement)
Q3. "The time commitment for developing a distance education courses is comparable to those in face-to-face classes."	-8.0
Q4. "Teaching online will have no impact on my face-to-face courses and instruction."	-9.4
Q7. "My lectures cannot be replaced by technology tools."	-22.3
Q8. "There is no way for me to know if my students did the reading in a distance education class."	-6.8
Q12. "The technology of distance education courses is difficult to manage."	-21.4
Q13. "Good teaching principles will carry over from face-to-face to distance education courses."	+3.9

Some changes in attitude were more apparent than others. The notion of that there is transferability in best practices between online and face-to-face teaching only rose from 72 percent to 76 percent. In contrast, views on the inherent difficulty of managing the technology in an online class fell from 55 percent to 30 percent.

In two particular questions there seemed to be notable – and noteworthy – shifts. In Question 2 (degree of student interaction), 52 percent of faculty believed there would be less prior to taking the training, yet after the training this total barely budged (falling slightly to 51 percent). However, following the completion of actually teaching an online course, this belief dropped to 40 percent.

Question 5 proposed that students would learn less in an online course. Before training, this stood at an agreement among 48 percent of the faculty. The total dropped to 38 percent after training, and later fell to 32 percent after teaching online.

Faculty attitudes towards online teaching shifted after training, teaching, or both. This is not to say there was a wholesale revolution in instructors' outlook, but perhaps teachers found online education to be somewhat more valuable than originally believed. However, these changes in attitudes were decidedly more marked after teaching a course online compared to merely being trained to do so.

Further research would continue to track attitudes over time and in subsequent forays in teaching in an online environment. Would the sometimes-substantial changes in attitudes towards the teaching milieu continue to shift the more times faculty teach online, or would these attitudes plateau? Presumably, one would see continued shifts in attitude, although the increments of change would probably fall over time. Another study might follow these same attitudinal questions after each time a faculty member teaches a course. Over time, there may be continued variation in faculty beliefs in the pedagogical approach, but perhaps more stability on their views of technology.

Given that the online teaching experience was often a stronger determinant in shifting attitudes than that of training, we recommend future training experiences incorporate or approximate online experiences as much as possible.