BRIDGES AND BARRIERS TO TEACHING ONLINE COLLEGE COURSES: A STUDY OF EXPERIENCED ONLINE FACULTY IN THIRTY-SIX COLLEGES

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ABSTRACT

This paper reports on initial findings from a research study of factors that enable and constrain faculty participation in online teaching and learning environments. It is noted that demand for higher education continues to grow in the United States. It is argued that the nature of the higher education student population will likely continue to transform towards a non-traditional profile. These two trends drive an increased demand for alternative routes to a college degree and have fueled dramatic growth in online learning recently. The study identifies faculty acceptance of online teaching as a critical component for future growth to meet this demand and ensure quality. Through analysis of data from 386 faculty teaching online in 36 colleges in a large state university system, the most significant factors that support and undermine motivation to teach online are identified. The top motivator is a more flexible work schedule. The top demotivator is inadequate compensation for perceived greater work than for traditionally delivered courses, especially for online course development, revision, and teaching. However, respondents in this study chose to teach online for a wide variety of reasons many of which were associated with demographic and contextual differences. These distinctions are reviewed in light of their implications for future quality of online education. Additionally, through factor analysis, underlying constructs for online faculty motivations are identified. Finally, recommendations are made for policy, practice, faculty development and future research.

KEYWORDS

Faculty Participation, Motivators, Demotivators, Flexibility, Compensation, Faculty Satisfaction, Policy, Practice, Development

I. INTRODUCTION

Demand for higher education continues to grow in the United States. Statistics from the United States Department of Education indicate a 101% increase in the number of students enrolled in college between 1970 (7.3 million) and 2004 (14.7 million), and enrollment is predicted to continue to rise [1]. According to the National Center for Education statistics, the number of new undergraduates is expected to reach a new high each year from 2007 through 2015 [1]. This may not be surprising in that higher education has long been identified as means of increased social mobility. The monetary value of higher education is fairly clear, for example according to the Census Bureau, over the course of an adult's working life, high school graduates earn an average of $1.2 million; associate's degree graduates earn approximately $1.6 million; and bachelor's degree holders earn about $2.1 million [2]. Other researchers report that the differential in salaries based on educational attainment has increased over time such that male bachelor degree holders between the ages of 18–35 now earn 94% more than their higher school graduate counterparts [3]. However, other recent statistics reported by the Department of Education suggest that a

college degree may primarily allow wage earners to avoid losing ground, noting that workers whose terminal degree was a high school diploma saw a sizable decline in constant dollar wages from 1980–2004, while college graduates saw modest gains [1].

Beyond salaries college education is also correlated with higher levels of saving, increased personal and professional mobility, improved quality of life among children, better consumer decision making, and more leisure activities [4]. Of course the value of higher education is more than just financial—in a report funded by the Carnegie Foundation, other benefits of higher education included the tendency for college students to become more open-minded, rational, consistent, and less authoritarian. The report found that these characteristics were also communicated to succeeding generations [5]. Other non-monetary returns associated with higher education include reduced crime rates, more and better informed civic participation and improved performance across a broad range of socioeconomic metrics [3]. Finally, higher education can be viewed as unique mechanism for individual intellectual and ethical growth and advancement [6].

While continuing to provide many individual and societal benefits and in the face of expanding enrollments, US higher education has undergone significant changes in recent years. In fact, the composition of US higher education today can be characterized as "non-traditional," where traditional is defined as college attendance immediately following high school with at least some financial support of parents. Roughly 75% of all college students in 1999–2000 had at least one non-traditional characteristic (age, job status, etc.) [7]. The growth in demand for opportunities that satisfy the needs of non-traditional students track this ongoing and dramatic change in the nature of higher education in the United States. In the last decade distance education has been increasingly employed as a means through which non-traditional students can meet the often competing demands of school, family, and work. Colleges have begun to recognize that non-traditional students require additional modes of access. For example, a majority (56%) of all two and four-year higher education institutions offered distance learning opportunities in 2001 [8]. Among public institutions that number is far higher, with roughly 90% of all two and four-year public colleges offering at least some distance learning courses in 2001 [8]. The vast majority of these courses are now offered over the internet—90% of colleges offering distance education reported that they offered asynchronous internet-based courses [8]. It is currently estimated that 3.1 million students are enrolled in such courses in the US. Further, it is estimated that growth in enrollments in online higher education will continue to represent the majority of distance education offerings, and with growth rates about ten times that of traditional, classroom-based higher education [9].

Given the longstanding importance of higher education as a means of social mobility and individual improvement, the changing nature of US higher education enrollments from traditional to non-traditional, and the projected growth in distance and online learning as a mechanism to accommodate the needs of the increasing majority of non-traditional college students, it is critical that we examine the factors that support and inhibit the quality of education in this arena. High among such factors are faculty issues, many of which appear to be unaddressed. For example, despite rapidly increasing enrollments in online learning in higher education, a minority (less than one-third) of US Chief Academic Officers believe that their faculty fully accept the value and legitimacy of online education [9]. Clearly the cooperation and acceptance of higher education professors is of central importance to the quality of distance and online education. Given their role as curriculum developers and teachers, college faculty are directly and indirectly responsible for the nature and quality of teaching and learning in higher education. Consequently, understanding issues that enable and constrain successful faculty participation in such new modes of education is crucial. This study therefore examines factors that both support and inhibit faculty motivation for teaching in online environments.

II. RELEVANT THEORETICAL FRAMEWORKS

With approximately 100,000 faculty already involved in online teaching and learning at some level in the US [10], we have reached a stage in which the early adopters are, to a large extent, already involved. We need to know more about the factors that lead less enthusiastic faculty to become engaged in online teaching and learning. A promising conceptual frame is the literature reflecting theoretical models of social change and adoption of innovation in academic settings. Though never coherently applied to the context of online teaching, a number of relevant change and innovation-adoption models exist (e.g. [11, 12, 13, 14, 15, 16, 17, 18, 19] among others). A component of this research is to identify which of these models is best suited to understanding faculty adoption of online teaching.

A useful direction in this regard is to examine the adoption of online teaching as a process, rather than an event, reflecting early and influential theories such as Stages of Concern Model [13], as well as more recent conceptions such as Concerns Based Adoption Model (CBAM) [16]. The Diffusion of Innovation Model [18] suggests we simultaneously examine characteristics of the individual adopter, the institutional setting, and the technology itself—steps that have not been taken in research on faculty adoption of online teaching in higher education. In this paper we begin this process by identifying the most commonly expressed concerns stated by faculty with regard to their motivation to teach in online environments. Reflecting the theoretical and research literature in this arena we examine these concerns vis a vis a multitude of potential barriers and affordances including institutional settings, technologies used, faculty demographics, policies, and incentive systems.

III. REVIEW OF RESEARCH LITERATURE

The benefits of online education cited by faculty have been well documented (e.g. [20]) and include greater and higher quality interaction with students [21, 22, 23, 24, 25]; increased convenience and flexibility for their teaching and students' learning [22, 26, 27]; better access to student populations and increased access for students to higher education [22]; enhanced knowledge of educational technology [28, 29, 30]; increased opportunities for professional recognition and research [21, 24, 31]; high levels of student learning [21, 30, 32, 33]; greater necessity and opportunity for more systematic design of online instruction and a corollary positive impact on student learning and on classroom teaching [34].

Frequently cited barriers to online teaching include the greater amount of time that is required [22, 27, 30, 31, 35, 36]; compensation issues [22, 24, 28, 29, 37]; intellectual property ownership issues [22, 39, 40]; more work to develop and teach online (which is possibly counterproductive to professional advancement) [36, 37]; technical difficulties [22, 36, 41, 42]; inadequate training, support, and the addition of new roles (e.g., faculty become the helpdesk) [27, 28, 30, 36].

The majority of previous studies have looked at only a fraction of possible motivators and demotivators for online teaching, generally from the perspective of a relatively small sample of professors at a single institution, usually employing a single methodology. While there have been some notable exceptions (e.g. [43, 44, 45]), these broader studies did not focus specifically on the concerns of higher education faculty. The current study does emphasize online college faculty concerns. Our research into faculty motivators and demotivators also employed multiple methodologies, quantitative and qualitative, with a broader sample of faculty from a larger range of institutions and institution types then previous investigations focused on higher education settings. Some of the prior studies and instrumentation served as the basis for development of an online questionnaire and focus group protocols which solicited ratings by faculty of the importance to them of various sources of potential satisfaction or dissatisfaction with teaching online at their university, as explained further below.

Previously [46], the authors reported on aspects of preliminary qualitative research which included guided discussions with faculty focus groups. The current paper presents quantitative results of a survey of faculty who have taught online from 36 colleges in a nationally recognized program in a single state university system in the Northeastern United States. These results, while also preliminary, are suggestive and may point in promising directions for future research.

IV. METHODS

To begin to understand the variety of motivators and demotivators for teaching in online environments we surveyed the literature in this area and constructed a pilot survey of these factors. Feedback on the items that were included in the pilot survey was solicited through ninety-minute focus group implemented with six faculty and four doctoral students from three colleges representing a diversity of backgrounds. The group included faculty from a university center, a four-year private liberal arts college, and a private technology college. All of the participants had an expressed interest in the use of technology in education and were members of a forum that met on a regular basis to discuss research in instruction, design, and technology. Details on this field-testing of the survey follow.

Statements about the various advantages and disadvantages of teaching online were listed. For the items describing potential advantages, the pilot group participants were asked to read the statement and, using a seven point likert-type scale, rate the degree to which the advantage affected their motivation to teach online. If the stated advantage increased their desire to teach online they were instructed to choose a higher number (5, 6, 7). If the advantage did not increase their desire to teach online they were instructed to choose a lower number (1, 2, 3). Participants in the pilot group were also asked to write notes on aspects of the items that were unclear or confusing, and to suggest motivators and demotivators that were not covered. Feedback from the pilot group was recorded by one of the researchers, and subsequently suggestions regarding item clarity and additional motivators and demotivators were integrated into an expanded and re-formatted version of the original instrument. This version of the instrument was then programmed for online implementation using commercial survey software.

In the fall 2005 semester the survey was administered to faculty teaching in a multi-institutional online program in a single state university system in the Northeastern United States. The researchers worked with the program administrators to solicit respondents. An initial email soliciting participation was sent to all faculty teaching in the program in the fall semester. Follow-up email reminders were sent in two-week intervals three times over a six week period. Five hundred and five questionnaires were electronically collected from faculty teaching in 36 of the 40 institutions in the program that semester, including 119 blank questionnaires. These questionnaires were generated when a respondent followed a link to the survey but did not answer any of the questions, choosing instead to close the survey at that time. These blank surveys were excluded in the analysis. In this initial stage of the research 386 usable responses were therefore gathered, representing a response rate of 61%.

Demographics of the survey respondents are included in Table 1. Demographic information includes the type of college in which the respondent taught, gender, age, academic rank, online teaching experience, number of students in most recent online course, and computer skill level of the respondent. Demographic results suggest a fairly broad representation of faculty from a variety of age groups, college types, and academic ranks. The sample is skewed towards a representation of more experienced online instructors and is in alignment with the population from which the sample is drawn, one characterized by a large proportion of experienced online instructors. However, although this is a fairly large and broad sample, results must be viewed with caution. The response rate suggests that the sample may not be representative of the entire population of online faculty in the program. More importantly, a broad sample of faculty

who were not teaching online were excluded, and these faculty members undoubtedly have a somewhat different (and more negative) view of motivations and demotivations.

While controversy exists regarding the choice of parametric or non-parametric statistics to analyze ordinal data (e.g. [47]), the more conservative approach is to treat such data as non-parametric in nature. Examination of differences in motivational influences conducted in this paper therefore relies on the use of Pearson chi-squares and standardized adjusted residuals resulting from cross tabular analysis. Standardized adjusted residuals are the observed minus expected value for a table cell divided by an estimate of its standard error. The resulting value is expressed in standard deviation units above or below the group mean. Generally results that indicated differences of more than one standard deviation above or below the mean for an item were considered to be important.

This is exploratory research. We therefore set the significance threshold somewhat high. Three chi-square results are reported here: Pearson chi-square, likelihood ratio and linear-by-linear association. In most cases all three tests were below the .05 level of significance indicative of significant differences, i.e. those unlikely to have occurred randomly or by chance. However, in certain cases we chose to include suggestive results where only one or two tests met that threshold. So, results included here have at least one chi-square test that was at or less than the .05 level of significance. Finally, motivational differences were not considered significant for table cells with expected values less than 5 except in instances where the expected value was for a "neutral" response, i.e. where there was an indication that a difference did exist because very few respondents responded with a neutral choice. These three criteria guided efforts to identify significant motivational differences for online teaching by demographic and contextual factors.

V. RESEARCH QUESTIONS

1) What are the advantages of online teaching that recent online instructors report to increase their motivation to teach in online environments? 1a) Do the ranking of these motivators vary based on contextual and/or demographics such as gender, age, faculty rank, online experience or other factors?

2) What are the disadvantages that recent online instructors report as decreasing their motivation to teach in online environments? 2a) Do these demotivators vary based on contextual and/or demographics such as gender, age, faculty rank, online experience or other factors?

3) Do items in the survey used in this study cohere into statistical factors suggesting that they reflect latent constructs interpretable as motivators and demotivators for teaching online that may be useful in future research?

VI. RESULTS

Research Question 1) What are the factors that recent online instructors report to increase their motivation to teach in online environments?

The results of the survey presented in Table 2 provide an initial answer to this question. As can be seen from these results the motivator rated most highly by respondents included a more flexible work schedule. Following closely were a number of factors that reflect interests in taking on a new challenge, addressing student needs, learning about technology and pedagogy, and providing access to new student populations. Statements that suggested that online education might have monetary or other professional benefits were

not identified as highly as other possible motivators for teaching online.

2) Do the ranking of these motivators vary based on demographics such as gender, age, faculty rank, online experience or other factors?

Results obtained here suggest that certain demographic and contextual factors are associated with respondents' ranking of the motivators. Differences with regard to factors that motivate faculty were observed by gender, age, academic rank, whether the instructor volunteered or was required to teach online, by computer skill level, and by institutional setting (e.g. whether the instructor taught in a community college, or four-year college).

A. Results: Motivators

Gender — Two differences were identified with regards to gender. First, female respondents were more likely to report that they were motivated to teach online because online teaching accommodated other life needs (such as child care, transportation, and other family needs). Additionally females identified reduced commuting time or hassle as a motivator more frequently than their male counterparts (Tables 3 and 4).

Age — With regards to age, more "mature" faculty (those 45 or over) were more motivated by opportunities to experiment with new pedagogy then were younger faculty (Table 5). Younger faculty were more motivated (perhaps unrealistically) by opportunities to demonstrate competencies important for tenure or promotion that they believed online teaching provided (Table 6). Younger faculty also reported being motivated by other material incentives that might be available for online teaching (Table 7) and were more likely to report that online teaching might be a condition of employment as a motivating factor (Table 8).

Full-Time/Traditional versus Part-Time/Non Traditional — Motivational differences were also identified by the employment status of the faculty. Part-time/Non-Traditional faculty (lecturers, instructors, and adjuncts) were over represented as a group that identified the capacity of online teaching to accommodate other life needs as a motivator for online teaching, while Full-time/Traditional faculty (assistant, associate, and full professors) were under represented in this category (Table 9). Part-time faculty were also somewhat more motivated by the possibility that online teaching could provide more free time for other professional activities and reduce commuting time or hassle (Tables 10 and 11). Part-time instructors were also more motivated by the opportunity to teach a new subject area and by the possibility that online teaching could promote job security and might be a condition of employment (Tables 12–14).

Voluntariness — Faculty who reported that they volunteered to teach online (as opposed to those reporting that they were asked or required to do so) were more motivated by opportunities to reflect on their classroom teaching, experiment with new kinds of pedagogy, to gain new kinds of knowledge from the experience, and to renew their interest in teaching (Tables 15–18). Respondents who reported that they were asked or required to teach online were more motivated by the fact that online teaching was a condition of employment (Table 19) and by the possibility that additional material incentive might be offered for teaching online (Table 20).

Computer Skill Level — Computer skills played a role in the desire to teach new subject areas through the use of online instruction – those faculty with higher skill levels (perhaps a measure of readiness)

reported this opportunity to be a greater motivator than less computer savvy faculty (Table 21). Faculty with better computer skills also reported that they were not as motivated by the new challenge that online teaching might represent (Table 22) but were instead more motivated by opportunities to mentor others, especially when compared to faculty who had only average computer skills (Table 23).

Institution Type — Different kinds of institutions were represented in the survey sample, including community colleges, four-year comprehensive colleges, technology colleges, specialized institutions, and university centers. A number of motivational differences were associated with these different institutional settings. For example faculty from community colleges were more likely to report that they had volunteered to teach online rather than being asked or required to do so (Table 24). Given that "voluntariness" is associated with a number of positive outcomes, this may be an important result.

Other institutional differences suggest that faculty at four-year institutions were more likely to feel motivated by the potential of online teaching to accommodate other life needs (such as child care, or other family needs) (Table 25) and to teach a new subject area (Table 26) while faculty at two colleges were more motivated by the belief that online teaching could offer an opportunity to reflect on and improve classroom teaching (Table 27), promote job security (Table 28). Compared to four-year college faculty, community college faculty were particularly unmotivated by the possibility that online teaching might be a condition of their employment (Tables 29).

Demographic and institutional contextual differences were also associated with factors that faculty found particularly demotivating with respect to their choice to teach online. These will be discussed in further detail in the next section.

B. Results: Demotivators

2) What are the factors that recent online instructors report decrease their motivation to teach in online environments?

Results here again reflect the experience and commitment of the group of online faculty surveyed (Table 30). Very few of the statements describing possible disadvantages of online teaching had the effect of decreasing the desire to teach online very much. Even allowing for this demotivation there were some items that were more important than others. Topping the list of demotivators were issues surrounding compensation for course development, revision, and teaching, and concerns about students' access to the online environment. The compensation issues may be related to the next group of concerns regarding additional time required to develop and teach online courses, which fell just below the concern that campus administration may not recognize the additional effort required to teach online. Given the advanced experience of this population of faculty it may not be surprising that they were not demotivated from online instruction by lack of familiarity with online technology or pedagogy as seen in these results.

2a) Do these demotivators vary based on demographic variables such as age, faculty rank, online experience or other factors?

Differences in factors that undermine motivation to teach online were apparent among the respondents in the following categories: age, academic status, online teaching experience, whether the respondent volunteered or was asked to teach online, computer skill level, and institution type (community colleges v. comprehensive colleges).

Age — Age of the instructor was associated with concerns about lack of recognition for online teaching in regard to tenure decisions, salary increases, the possibility that online teaching may not be valued by campus administrators, and concerns that others might feel online courses were of inferior quality compared to traditional courses. Perhaps understandably, younger faculty (defined here as those under 45) were more demotivated from online teaching (Tables 31-34) by these concerns than older faculty (over age 45).

Academic Status, Tenure — Faculty tenure status appears to be related to factors that undermine motivation to teach online. Faculty who were either non-tenure track or untenured were over represented in the group that reported that their desire to teach online was decreased by inadequate compensation for course development, online teaching, and online course revision. Tenured faculty (associate and full professors) were under represented in these categories (Tables 35–37). Traditional faculty (assistant, associate and full professors) were more demotivated by the perception that online teaching was more time consuming than were faculty who were part-time or non traditional, defined as adjuncts, instructors and teaching assistants (Table 38).

Online Teaching Experience — The number of times an instructor had taught online was associated with the relative importance of the demotivators. Less experienced online teachers (those who had taught one or two times) were over represented in the group that reported that absence of face-to-face interaction decreased their desire to teach online (Table 39). Faculty who had taught three or more times were under represented in this category. Similarly, less experienced instructors were also more put off by their unfamiliarity with effective online pedagogy, lack of opportunity to observe online teaching before engaging in it, lack of opportunity to experiment with the technologies of online teaching, and inadequate time to learn about online teaching (Tables 40–43). Less experienced instructors were also over represented among those reporting that compensation issues (for course development and teaching) undermined their desire to teach online. More experienced instructors were under represented in these categories (Tables 44 and 45). Finally, less experienced instructors appeared more concerned that offering online education might reduce the reputation of their institution, while more experienced instructors were under represented among respondents who identified this as a factor that reduced their desire to teach online (Table 46).

"Voluntariness" also played a role with regard to the factors that demotivated faculty from teaching online. Faculty who felt they had been required to teach online were more demotivated by perceptions that the technology was confusing, the absence of face-to-face interaction, perceptions that students might lack access, lack of opportunity to experiment with technology, inadequate time to learn about online teaching and inadequate time to develop online courses (Tables 47–52). Non-volunteers also felt more put off from online teaching by concerns that it might not be recognized by campus administration and by the perception that online courses might be of inferior quality to classroom-based courses (Tables 53 and 54).

Institutional Differences were again evident when analyzing demotivating factors for online teaching. Faculty at comprehensive colleges (four-year institutions) were more concerned about lack of recognition of online teaching with regards to tenure decisions than were faculty at two year colleges (Table 55). Faculty at four-year institutions were also more put off by the perception that online teaching can be confusing and that there is inadequate time to revise online courses (Tables 56 and 57).

Computer Skill Level was associated with demotivational aspects of online teaching. Faculty who reported that they had higher computer skill levels were over-represented in the categories of respondents who reported that inadequate compensation and lack of recognition from the campus administration

decreased their desire to teach online while those with lower computer skill levels were underrepresented in these categories (Table 58 and 59).

VII. FACTOR STRUCTURES FOR MOTIVATORS AND DEMOTIVATORS

3) Do items in the survey used in this study cohere into statistical factors suggesting that they reflect latent constructs interpretable as reliable motivators and demotivators for teaching online that may be useful in future research?

To understand whether the items in the survey measure latent constructs that can be interpreted as motivators and demotivators for online teaching, we conducted a factor analysis. First, a maximum likelihood estimate with direct oblique rotation was used to test the factor construct of the items that reflected advantages or presumed motivators for teaching online. The inter-correlation coefficients for the items were greater than .30 and the KMO sampling adequacy (.90) and Bartlett's test of sphericity (chi-square is 3310.91, $p < .001$) supported the applicability of conducting factor analysis. For the motivators, five factors were extracted with eigenvalues greater than 1. Using this model, 64.6% of the total variance could be explained by these factors. The overall reliability (Chronbach's alpha) was .94 with individual reliability measures between .78 and .91. This analysis led to an interpretable factor structure and we labeled the factors "learning", "profession", "flexibility", "access" and "novelty", reflecting the nature of the items and concerns that each contained (Table 62).

For the demotivators the same procedure was followed. The inter-correlation coefficients for the items were greater than .30 and the KMO sampling adequacy (.91) and Bartlett's test of sphericity (chi-square is 4498.81, $p < .001$) again supported the applicability of conducting factor analysis. Five factors were extracted with eigenvalue greater than 1. In all, 71.5% of the total variance could be explained. The overall reliability (Chronbach's alpha) was .96 with individual reliability measures between .83 and .93. These factors were labeled "compensation", "reputation", "complexity", "promotion" and "technology", reflecting the nature of the items and concerns that each contained (Table 63).

VIII. DISCUSSION

The results presented here advance our understanding of the issues that support and undermine faculty willingness to teach in online environments and thus our ability to make higher education more accessible through this modality. Given the increased demand and historic benefits of higher education, coupled with the changing nature of the college student population, providing alternative options for access to college will continue to be a critical strategy to satisfy societal needs. Gaining insight into the factors that enable and constrain faculty acceptance and ongoing participation in the e-learning enterprise is a crucial piece of the puzzle. In this section we will first discuss motivators and then demotivators, reflecting results presented in the previous section.

A. Motivators

From these results we see that faculty in the state university systems studied here value online teaching for a number or reasons. "Flexibility" is among the most appealing advantages reported by this group of faculty who are experienced with online teaching. In light of this finding, it seems sensible to highlight and to preserve this aspect of the online teaching experience as fully as possible. Helping other faculty to understand that online teaching can provide greater control over their work life (as reported by these

experienced online instructors) will be beneficial in promoting online teaching as a method of increasing access to higher education. Taking care that flexibility and convenience do not take such a high priority that they begin to undermine the quality of the experience for students is a prime concern. Faculty development activities need to articulate both of these possibilities, and encourage a balanced approach. While online teaching can promote flexibility and convenience (for both students and faculty) it should not take precedence to the extent that quality suffers. Helping faculty to establish and maintain regular schedules for teaching and managing online courses is crucial to avoiding both the potential for overwhelming levels of interaction and for avoiding the potential problems associated with too little interaction. Providing direction for policies with regard to expected and reasonable levels of interaction with and between faculty and students is also useful in this regard.

Faculty respondents were also motivated by the opportunity to gain new pedagogical knowledge through online teaching, including opportunities to experiment with new pedagogy, reflect on classroom teaching, and gain new understanding of assessment issues. Respondents also reported being motivated by opportunities to learn about new technology and take on a new challenge more generally. In order to continue to attract new faculty to online teaching these opportunities for learning should also be highlighted in faculty development and other promotional efforts.

Faculty in this study were also concerned about their students' welfare and with increasing access to higher education (and their institutions specifically) through online teaching. Opportunities to reach new students with different cultural backgrounds, more mature students, and students in different geographical locations all appealed quite highly to respondents. Helping other faculty to understand that experienced colleagues report that online teaching can help achieve this highly rated objective will also be valuable in achieving more committed participation to online teaching.

Statements describing possible advantages that reflect either enhanced compensation or professional advancement opportunities as a result of online teaching were rated lower by respondents than other potential advantages. It appears that either faculty are not motivated by such possibilities or, given the results with regard to the demotivators, online teaching does not offer these possibilities. The latter seems the more likely of the two possibilities. Not only do respondents rate these potential advantages as less motivating, but fewer respondents chose to offer a rating of any kind for these potential motivators, choosing instead the N/A option. From these results it appears that compensation issues can undermine desire to teach online, especially given the disadvantages that were identified.

Contextual Differences — Some of the most interesting results of the study are the demographic and contextual factors that seem to play a role in the choice to teach online. If we seek to understand why higher education faculty may accept or reject online instruction, it is critical that we recognize the complexity of the issue. The theme of quality in online teaching and learning has a long history and lineage dating to the earliest efforts in distance education (e.g. [48]). Results presented here suggest that the choice to participate in online teaching is influenced by many factors. Engaging faculty as stewards of quality in this enterprise requires that we understand why they are likely to accept or reject this role.

Gender — Results hinted that female faculty may be more attracted to online teaching for the flexibility and convenience it affords. These results support and extend previous research into the experience of women as learners in online education (e.g. [49]) documenting its appeal as a mechanism to cope with the myriad roles women play and personal and professional challenges they confront. Our results suggest that these advantages may appeal to female online instructors as well as online learners.

Age — A number of differences in ranking of motivators were associated with age. These mirror other differences that were associated with academic status and experience with online teaching. Results suggest that younger faculty, perhaps naturally, appear more concerned with opportunities to advance in their careers and seem to be pinning some of their hopes to advantageous experiences gained through online course development and teaching to accomplish this goal. Much of the culture of higher education is incompatible with these hopes; however, new faculty in certain institutional contexts are warned that such activities may actually be detrimental, taking away from more important responsibilities such as research and publication. It seems clear that if younger faculty are to play a role in the furtherance of quality in online education, reward structures need to be aligned with that objective.

Employment Status — Other motivational differences were associated with employment structures. Full and part-time faculty ranked motivators differently. It is no secret that part-time instructors play a significant role in the academic offerings of many institutions of higher education, and are thus, by default, stewards of the quality of online education. Results suggest that part-time instructors are more appreciative of the benefits of flexibility associated with online teaching, ranking highly its capacity to accommodate other life needs, provide free time for other activities and reduce commuting time or hassle. Flexibility and convenience are well known advantages of online education, but again we need to take care that these attributes do not take precedence over pedagogical quality, learner engagement, and innovation. Flexibility and convenience can become ends rather than means and given the large and increasing number of part-time faculty involved in higher education, both online and in the classroom, we need to be aware of the potential pitfalls. That part-time faculty were over represented as a group that identified flexibility and convenience as a primary motivator may be a cause for concern in this regard.

Voluntariness and Institutional Context — Faculty who taught in two year colleges were more likely to volunteer to teach online than were faculty employed by four year colleges. It appears likely that cultural distinctions in these institution types favor online teaching for community college faculty. Given that voluntariness is associated with a range of other positive variables, this result may account for the relative over representation of community colleges among the ranks of online providers. Volunteers (and thus community college faculty) were also over-represented among faculty who ranked pedagogical value of online course development as a motivator, highlighting opportunities to reflect on classroom instruction, experiment with new forms of pedagogy, gain new knowledge, and renew interest in teaching. Non-volunteers associated the potential for material incentives with their desire to teach online. Four year college faculty were over represented among those who gave high marks to flexibility and convenience indicators such as benefits associated with child care or other family needs. Again it must be stressed that such convenience benefits need to be balanced against pedagogical quality issues. Given that voluntariness appears associated with such a broad range of factors likely to increase quality, these results suggest we need to work to ensure that faculty feel ownership over the decision to teach online.

Computer Skill Level — Faculty with higher reported computing skills appeared less motivated by the notion that online teaching might be a new challenge and more motivated to act as a mentor to others. Providing such opportunities through professional development programs has some obvious potential benefits in terms of engaging additional faculty in the quest for quality. Better computing skills may also be a prerequisite to the desire to teach in a new subject area online; respondents with lower computer skills did not identify this possibility as motivating as those with higher abilities. It seems likely that the struggle associated with mastering the technical aspects of online teaching may be a sufficient challenge without adding new subject matter into the mix. A potential lesson for faculty development professionals—keep it simple, especially with computer novices.

We turn now to a discussion of the demotivators.

B. Demotivators

The results on demotivators for teaching online are instructive in a number of ways. First, for this group of experienced online teachers, there were very few strongly demotivating factors – respondents simply did not weigh the effects of the disadvantages very heavily against their motivations to teach online. The disadvantages were seen as only somewhat demotivating; the highest mean score was 4.15 on a scale of 1-7 with 7 indicating the highest level of demotivation. Given the relatively consistent finding that faculty report online teaching takes more time and effort than classroom teaching, it may not be surprising that our respondents felt that inadequate compensation was their top demotivator. In fact, respondents identified inadequate compensation for course development, revision, and teaching as the most demotivating disadvantages associated with online teaching.

We felt it useful to again look at subgroups to determine where demotivational differences might be seen. We found distinctions based on age, academic status, online teaching experience, voluntariness, institution type, and computer skill level. Again the theme of faculty stewardship of online educational quality is a useful lens for framing the discussion of these differences. The results suggesting that younger faculty were more demotivated by concerns around professional advancement is cause for concern. If the goals of increasing access and ensuring quality of online higher education are to be realized it is crucial that younger faculty not be dissuaded by poor alignment between these goals and institutional reward structures. Overrepresentation of younger faculty among the group that rated a lack of recognition of online teaching by campus administration in general, and with regard to tenure decisions and salary increases specifically suggests such a misalignment exists for these instructors.

Also potential causes for concern are the differences in ranking of demotivators by academic status. Non-tenure (part-time) and untenured (assistant professors) were over represented among the group that identified compensation issues as undermining their desire to teach online. Results reflecting the undermining impact of inadequate remuneration for online course development, teaching, and revision, especially among a more dedicated cohort of online educators such as found in our sample, does not bode well for increased adoption of online teaching among less enthusiastic faculty. Again, given the increasing dependence on part-time faculty in higher education (both online and in the classroom) and the need to involve younger, pre-tenured faculty as stewards of online educational quality, these results raise the need for a discussion of policies that address these concerns. Results suggesting that traditional faculty (assistant, associate, and full professors) were more demotivated by concerns relating to the time consuming nature of online education may also be of concern. Time is a proxy for priority. These results reflect the perennial concern [48] that online learning may be marginalized from the core cultural practitioners, i.e. traditional faculty, and reside at the periphery of college life with the stigmatizing impact that such marginalization implies. If the goals of increased access and quality are to be achieved we need policies that enable full-time faculty to make online education a higher priority. Results suggesting that faculty at four-year colleges were more concerned about lack of recognition for online teaching in tenure decisions is further evidence of potential exclusion of online education from the mainstream of academia. Again, an examination of institutional reward structures relative to their impact on faculty priority setting would be a reasonable starting point for the discussion.

A number of demotivational distinctions related to online teaching experience suggest the need for ongoing professional development. That less experienced online teachers may be more dissuaded by their unfamiliarity with effective online pedagogy, absence of face-to-face interaction, lack of opportunity to observe online teaching before trying it, lack of opportunity to experiment with online technology before adopting it, and inadequate time to learn about online teaching suggests that future growth and quality is contingent on the availability of training. As noted above such professional development needs to be coupled with policies that make online education a recognized institutional priority. Results suggesting

that faculty with better computing skills were more motivated by opportunities to mentor others than by more general new challenges may be useful in this regard. Leveraging the assistance of such more able peers represents one promising strategy for helping less experienced online instructors to confront the challenges they identified as demotivating.

Factor Analysis

The factor analysis presented here suggests that the data has an interpretable factor structure. Relatively clear factors emerged, reflecting faculty concerns compatible with previous empirical and conceptual research in this area. These results suggest that motivational items reflect latent constructs important to understanding bridges and barriers to online teaching. Bridges include faculty learning, professional advancement opportunities, flexibility and convenience, provision of access, and benefits associated with novelty and innovation. Barriers reflect issues associated with inadequate compensation relative to time investment, lack of recognition for and negative reputation of online teaching, complexities of technology and online pedagogy, and reward structure misalignments with online teaching. We encourage other researchers to use this instrument in future investigations to provide additional checks of validity and reliability regarding bridges and barriers to online teaching.

IX. LIMITATIONS AND FUTURE RESEARCH

As an exploratory study the research approach utilized here sought to generate questions as well as answers. While it is useful to attempt to generate new hypotheses, examination of so many individual variables can result in Type I errors and thus spurious findings. Therefore these results need to be replicated through additional research. This is a preliminary study of a relatively small range of faculty (fewer than 400) who are experienced in teaching online, at 36 campuses that are part of the same state university system. We need to have data on faculty from different settings and in different states in order to determine the extent to which motivators and demotivators are shaped by the other contexts, or to which they are similarly perceived in terms of their importance at all types of institutions. We also need a larger and more nationally representative set of responses in order to validate the generalizability of the factor structures observed for these data. The participants in this study appeared to be highly committed to online teaching. Therefore, most importantly, we need to study faculty who have rejected or not had an opportunity thus far to teach online in order to compare their ratings of motivating and demotivating aspects of teaching online with those of more experienced online instructors.

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XI. ABOUT THE AUTHOR

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XIII. APPENDIX: TABLES AND TESTS

Table 1: Demographic Data and Teaching Experience (N=386)

	Frequency	Percent	Valid Percent
Institution			
Community College	204	52.8	55.7
University Center	19	4.9	5.2
University College	104	26.9	28.4
College of Technology	12	3.1	3.3
Specialized College	17	4.4	4.6
Other	10	2.6	2.7
Chose not to answer	11	2.8	
Blank (no answer)	9	2.3	
Gender			
Male	174	45.1	47.0
Female	196	50.8	53.0
Chose not to answer	12	3.1	

Blank (no answer)	4	1.0	
Age			
20 – 24	2	.5	.6
25 – 29	12	3.1	3.4
30 – 34	24	6.2	6.8
35 – 39	37	9.6	10.5
40 – 44	33	8.5	9.4
45 – 49	41	10.6	11.6
50 – 54	66	17.1	18.8
55 – 59	64	16.6	18.2
60 – 64	42	10.9	11.9
65 or older	31	8.0	8.8
Chose not to answer	30	7.8	
Blank (no answer)	4	1.0	
Academic Category			
Teaching Assistant	6	1.6	1.6
Instructor	57	14.8	15.5
Lecturer	10	2.6	2.7
Adjunct Professor	128	33.2	34.8
Assistant Professor	55	14.2	14.9
Associate Professor	46	11.9	12.5
Full Professor	66	17.1	17.9
Chose not to answer	14	3.6	
Blank (no answer)	4	1.0	
Times teaching			
First time	66	17.1	18.1
Second time	30	7.8	8.2
Third time	52	13.5	14.2
Fourth time	42	10.9	11.5
Fifth time	34	8.8	9.3
More than five times.	141	36.5	38.6
Chose not to answer	8	2.1	
Blank (no answer)	13	3.4	
Number of Students in Course			
1–10	37	9.6	9.9
11–20	186	48.2	49.9
21–30	103	26.7	27.6
31–40	23	6.0	6.2
41–50	15	3.9	4.0
More than 50	2	.5	.5
More than 100	7	1.8	1.9
Blank (no answer)	13	3.4	

Computer Skill			
Low	29	7.5	7.9
Medium	168	43.5	45.9
High	169	43.8	46.2
Chose not to answer	7	1.8	
Blank (no answer)	13	3.4	

Table 2: Descriptive Statistics for Motivators to Teach Online

Teaching online can provide…	N	Mean	SD
14. …a more flexible work schedule	346	6.08	1.439
23. …an opportunity to "stretch," - take on a new challenge	351	5.87	1.359
37. Students may want online courses	347	5.76	1.540
24. … an opportunity to learn new technology	349	5.74	1.513
20. …an opportunity to gain new knowledge, skills, and insights about my teaching	350	5.72	1.414
19. …an opportunity to experiment with new pedagogical approaches	348	5.70	1.333
27. …an opportunity to reach students in different geographical locations	347	5.69	1.685
29. … an opportunity to reach students at different stages of their learning lives (e.g. more mature/experienced, older, younger, etc.)	343	5.68	1.748
28. … an opportunity to reach students with different cultural backgrounds	337	5.55	1.787
18. …an opportunity to reflect upon and rethink classroom teaching	341	5.51	1.564
21. …an opportunity to experiment with alternative means of assessment	344	5.42	1.587
15. … accommodate other life needs (child care, transportation, other family needs)	330	5.41	1.930
17. …reduce commuting time, or hassle	326	5.30	2.100
25. … to renew interest in teaching (overcome staleness, apathy)	331	5.01	1.897
22. … a higher level of interaction with my students	344	4.82	1.961
31. Online courses/programs can allow an institution to maintain or increase enrollment/revenue and therefore promotes "job security."	320	4.80	2.017
16. … provide more free time for other professional activities (e.g. attend conferences, consulting, etc)	334	4.72	2.175
33. ...become a mentor or to assist others to learn about online teaching.	332	4.63	1.912
36. Colleagues may refer to online teaching in a positive way.	336	4.63	1.764
32. ...participate in a collaborative professional development activity (e.g. training) which enhances relationship with peers.	335	4.44	1.933
26. … to teach a new subject area	301	4.41	2.242
30. Teaching online can provide an additional opportunity to demonstrate competencies important for tenure and promotion	297	4.25	2.148
35. Other material incentives may be available for online course development	266	4.08	2.243
34. Teaching online may be a condition of your employment (hired to teach online)	240	3.68	2.327

Note: Range = 1 (not a motivator) to 7 (strongest motivator)

Table 3: Motivator Differences by Gender: "Online teaching can accommodate other life needs such as child care, transportation, etc."

			Life Needs			
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	Total
Gender	Male	Count	25	22	104	151
		Expected Count	25.1	15.3	110.6	151.0
		Adjusted Residual	.0	2.5	-1.7	
	Female	Count	29	11	134	174
		Expected Count	28.9	17.7	127.4	174.0
		Adjusted Residual	.0	-2.5	1.7	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.148(a)	2	.046
N of Valid Cases	325		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 15.33.

Table 4: Motivator Differences by Gender: "Online teaching can reduce commuting time or hassle."

			Reduce Commuting Time or Hassle			
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	Total
Gender	Male	Count	36	17	102	155
		Expected Count	31.9	11.6	111.5	155.0
		Adjusted Residual	1.1	2.3	-2.4	
	Female	Count	30	7	129	166
		Expected Count	34.1	12.4	119.5	166.0
		Adjusted Residual	-1.1	-2.3	2.4	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.500(a)	2	.024
N of Valid Cases	321		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.59.

Table 5: Motivator Differences by Age: Online teaching can provide opportunities to experiment with new forms of pedagogy.

			Experiment with New Pedagogy			Total
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	
Age 2	Under 45	Count	3	15	81	99
		Expected Count	5.2	9.4	84.4	99.0
		Adjusted Residual	-1.2	2.3	-1.1	
	45 or older	Count	14	16	196	226
		Expected Count	11.8	21.6	192.6	226.0
		Adjusted Residual	1.2	-2.3	1.1	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.215(a)	2	.045
N of Valid Cases	325		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.18.

Table 6: Motivator Differences by Age: Online teaching can provide opportunities to demonstrate competencies important for promotion or tenure.

			Demonstrate Competencies			Total
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	
Age 2	Under 45	Count	15	16	57	88
		Expected Count	27.0	15.1	45.9	88.0
		Adjusted Residual	-3.4	.3	2.9	
	45 or older	Count	71	32	89	192
		Expected Count	59.0	32.9	100.1	192.0
		Adjusted Residual	3.4	-.3	-2.9	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.813(a)	2	.003
Likelihood Ratio	12.554	2	.002
Linear-by-Linear Association	11.300	1	.001
N of Valid Cases	280		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 15.09.

Table 7: Motivator Differences by Age: Additional material incentives may be available for online teaching.

			Other Material Incentives			
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	Total
Age 2	Under 45	Count	20	8	48	76
		Expected Count	28.6	12.5	35.0	76.0
		Adjusted Residual	-2.4	-1.7	3.6	
	45 or older	Count	74	33	67	174
		Expected Count	65.4	28.5	80.0	174.0
		Adjusted Residual	2.4	1.7	-3.6	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.983(a)	2	.002
Likelihood Ratio	13.057	2	.001
Linear-by-Linear Association	10.614	1	.001
N of Valid Cases	250		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.46.

Table 8: Motivator Differences by Age: Online teaching may be a condition of your employment.

			Employment			
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	Total
Age 2	Under 45	Count	26	6	36	68
		Expected Count	33.3	6.8	27.9	68.0
		Adjusted Residual	-2.1	-.4	2.4	
	45 or older	Count	86	17	58	161
		Expected Count	78.7	16.2	66.1	161.0
		Adjusted Residual	2.1	.4	-2.4	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.729(a)	2	.057
Likelihood Ratio	5.687	2	.058
Linear-by-Linear Association	5.489	1	.019
N of Valid Cases	229		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.83.

Table 9: Motivator Differences by Employment Status - Full Time v. Part Time: Online teaching can accommodate other life needs.

			Life Needs			Total
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	
Full Time - Part time	Part Time - Non-traditional	Count	22	17	141	180
		Expected Count	29.2	19.3	131.6	180.0
		Adjusted Residual	-2.2	-.8	2.4	
	Full Time - Traditional	Count	31	18	98	147
		Expected Count	23.8	15.7	107.4	147.0
		Adjusted Residual	2.2	.8	-2.4	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.024(a)	2	.049
Likelihood Ratio	6.007	2	.050
Linear-by-Linear Association	5.973	1	.015
N of Valid Cases	327		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 15.73.

Table 10: Motivator Differences by Employment Status – Full Time v. Part Time: Online Teaching can provide more free time for other professional activities.

			Free Time			Total
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	
Full Time - Part time	Part Time - Non-traditional	Count	38	33	109	180
		Expected Count	49.5	25.6	105.0	180.0
		Adjusted Residual	-2.8	2.4	.9	
	Full Time - Traditional	Count	53	14	84	151
		Expected Count	41.5	21.4	88.0	151.0
		Adjusted Residual	2.8	-2.4	-.9	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.935(a)	2	.004
Likelihood Ratio	11.092	2	.004
Linear-by-Linear Association	3.838	1	.050
N of Valid Cases	331		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 21.44.

Table 11: Motivator Differences by Employment Status – Full Time v. Part Time: Online teaching can reduce commuting time or hassle.

			Reduce Commuting Time or Hassle			Total
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	
Full Time - Part time	Part Time - Non-traditional	Count	23	14	141	178
		Expected Count	35.8	13.8	128.4	178.0
		Adjusted Residual	-3.6	.1	3.1	
	Full Time - Traditional	Count	42	11	92	145
		Expected Count	29.2	11.2	104.6	145.0
		Adjusted Residual	3.6	-.1	-3.1	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.983(a)	2	.002
Likelihood Ratio	13.001	2	.002
Linear-by-Linear Association	12.361	1	.000
N of Valid Cases	323		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.22.

Table 12: Motivator Differences by Employment Status – Full Time v. Part Time: Online teaching can provide an opportunity to teach a new subject area.

			New Subject Area			
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	Total
Full Time - Part time	Part Time - Non-traditional	Count	44	18	99	161
		Expected Count	52.9	21.6	86.4	161.0
		Adjusted Residual	-2.2	-1.2	2.9	
	Full Time - Traditional	Count	54	22	61	137
		Expected Count	45.1	18.4	73.6	137.0
		Adjusted Residual	2.2	1.2	-2.9	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.568(a)	2	.014
Likelihood Ratio	8.600	2	.014
Linear-by-Linear Association	7.570	1	.006
N of Valid Cases	298		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 18.39.

Table 13: Motivator Differences by Employment Status – Full Time v. Part Time: Online Teaching can promote job security.

			Promote "Job Security."			
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	Total
Full Time - Part time	Part Time - Non-traditional	Count	27	32	108	167
		Expected Count	35.8	29.0	102.2	167.0
		Adjusted Residual	-2.4	.9	1.3	
	Full Time - Traditional	Count	41	23	86	150
		Expected Count	32.2	26.0	91.8	150.0
		Adjusted Residual	2.4	-.9	-1.3	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.955(a)	2	.051
Likelihood Ratio	5.971	2	.051
Linear-by-Linear Association	4.034	1	.045
N of Valid Cases	317		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 26.03.

Table 14: Motivator Differences by Employment Status – Full Time v. Part Time: Online teaching may be a condition of your employment.

			Employment			
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	Total
Full Time - Part time	Part Time - Non-traditional	Count	46	13	73	132
		Expected Count	63.5	13.9	54.6	132.0
		Adjusted Residual	-4.6	-.4	4.9	
	Full Time - Traditional	Count	68	12	25	105
		Expected Count	50.5	11.1	43.4	105.0
		Adjusted Residual	4.6	.4	-4.9	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	25.045(a)	2	.000
Likelihood Ratio	25.784	2	.000
Linear-by-Linear Association	24.674	1	.000
N of Valid Cases	237		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.08.

Table 15: Motivator Differences by Voluntariness: Online teaching can present opportunities to reflect on your classroom teaching.

			Reflect on Classroom Teaching			Total
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	
Volunteer Status	I was asked/required	Count	12	11	41	64
		Expected Count	7.1	5.8	51.0	64.0
		Adjusted Residual	2.1	2.5	-3.5	
	I volunteered	Count	26	20	231	277
		Expected Count	30.9	25.2	221.0	277.0
		Adjusted Residual	-2.1	-2.5	3.5	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.207(a)	2	.002
Likelihood Ratio	10.933	2	.004
Linear-by-Linear Association	9.740	1	.002
N of Valid Cases	341		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.82.

Table 16: Motivator Differences by Voluntariness: Online teaching can provide opportunities to experiment with new kinds of pedagogy.

			Experiment with New Pedagogy			Total
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	
Volunteer Status	I was asked/required	Count	8	13	48	69
		Expected Count	4.0	7.1	57.9	69.0
		Adjusted Residual	2.3	2.6	-3.6	
	I volunteered	Count	12	23	244	279
		Expected Count	16.0	28.9	234.1	279.0
		Adjusted Residual	-2.3	-2.6	3.6	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.235(a)	2	.001
Likelihood Ratio	11.627	2	.003
Linear-by-Linear Association	12.247	1	.000
N of Valid Cases	348		

(a) 1 cells (16.7%) have expected count less than 5. The minimum expected count is 3.97.

Table 17: Motivator Differences by Voluntariness: Online teaching can present opportunities to gain new knowledge.

			Gain New Knowledge			Total
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	
Voluntariness 1	I was asked/required	Count	10	6	52	68
		Expected Count	4.9	4.7	58.5	68.0
		Adjusted Residual	2.7	.7	-2.5	
	I volunteered	Count	15	18	249	282
		Std. Residual	-1.1	-.3	.4	
		Adjusted Residual	-2.7	-.7	2.5	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.126(a)	2	.017
Likelihood Ratio	6.962	2	.031
Linear-by-Linear Association	7.942	1	.005
N of Valid Cases	350		

(a) 2 cells (33.3%) have expected count less than 5. The minimum expected count is 4.66.

Table 18: Motivator Differences by Voluntariness: Online teaching can help renew interest in teaching.

			Renew Interest in Teaching			Total
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	
Voluntariness 1	I was asked/required	Count	12	17	34	63
		Expected Count	12.0	9.9	41.1	63.0
		Adjusted Residual	.0	2.7	-2.1	
	I volunteered	Count	51	35	182	268
		Expected Count	51.0	42.1	174.9	268.0
		Adjusted Residual	.0	-2.7	2.1	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.815(a)	2	.020
Likelihood Ratio	7.052	2	.029
Linear-by-Linear Association	1.575	1	.209
N of Valid Cases	331		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.90.

Table 19: Motivator Differences by Voluntariness: Online teaching may be a condition of your employment.

			Employment			Total
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	
Voluntariness 1	I was asked/required	Count	15	2	37	54
		Expected Count	26.1	5.6	22.3	54.0
		Adjusted Residual	-3.4	-1.8	4.6	
	I volunteered	Count	101	23	62	186
		Expected Count	89.9	19.4	76.7	186.0
		Adjusted Residual	3.4	1.8	-4.6	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.666(a)	2	.000
Likelihood Ratio	21.782	2	.000
Linear-by-Linear Association	17.815	1	.000
N of Valid Cases	240		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.63.

Table 20: Motivator Differences by Voluntariness: Additional material incentives may be available for online teaching.

			Other Material Incentives			Total
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	
Voluntariness 1	I was asked/required	Count	17	5	33	55
		Expected Count	20.5	9.1	25.4	55.0
		Adjusted Residual	-1.1	-1.7	2.3	
	I volunteered	Count	82	39	90	211
		Expected Count	78.5	34.9	97.6	211.0
		Adjusted Residual	1.1	1.7	-2.3	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.907(a)	2	.052

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.10.

Table 21: Motivator Differences by Computer Skill Level: Teach in a new subject area.

			New Subject Area			Total
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	
Computer Skill	Low	Count	11	2	10	23
		Expected Count	7.7	3.1	12.2	23.0
		Adjusted Residual	1.5	-.7	-1.0	
	Medium	Count	46	27	67	140
		Expected Count	47.1	18.7	74.2	140.0
		Adjusted Residual	-.3	2.8	-1.7	
	High	Count	44	11	82	137
		Expected Count	46.1	18.3	72.6	137.0
		Adjusted Residual	-.5	-2.5	2.2	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.783(a)	4	.029
Likelihood Ratio	10.707	4	.030
Linear-by-Linear Association	2.963	1	.085
N of Valid Cases	300		

(a) 1 cells (11.1%) have expected count less than 5. The minimum expected count is 3.07.

Table 22: Motivator Differences by Computer Skill Level: Online teaching can represent a new challenge.

			New Challenge			Total
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	
Computer Skill	Low	Count	0	4	23	27
		Expected Count	1.6	2.0	23.4	27.0
		Adjusted Residual	-1.4	1.5	-.2	
	Medium	Count	4	18	142	164
		Expected Count	9.8	12.2	142.0	164.0
		Adjusted Residual	-2.6	2.4	.0	
	High	Count	17	4	138	159
		Expected Count	9.5	11.8	137.6	159.0
		Adjusted Residual	3.4	-3.2	.1	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.853(a)	4	.000
Likelihood Ratio	23.361	4	.000
Linear-by-Linear Association	1.848	1	.174
N of Valid Cases	350		

(a) 2 cells (22.2%) have expected count less than 5. The minimum expected count is 1.62.

Table 23: Motivator Differences by Computer Skill Level: Online teaching can be an opportunity to act as a mentor.

			Mentor			Total
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	
Computer Skill	Low	Count	9	4	13	26
		Expected Count	6.8	4.2	15.0	26.0
	Medium	Count	41	33	79	153
		Expected Count	39.8	25.0	88.3	153.0
		Adjusted Residual	.3	2.4	-2.1	
	High	Count	36	17	99	152
		Expected Count	39.5	24.8	87.7	152.0
		Adjusted Residual	-.9	-2.3	2.5	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.846(a)	4	.065
Likelihood Ratio	8.842	4	.065
Linear-by-Linear Association	3.771	1	.052
N of Valid Cases	331		

(a) 1 cells (11.1%) have expected count less than 5. The minimum expected count is 4.24.

Table 24: Institutional Differences: Voluntariness by institution type.

			Voluntary Online Teaching			Total
			I was asked/required	Neutral	I volunteered	
2-year or 4-year	Two-year colleges	Count	14	5	185	204
		Expected Count	33.2	5.1	165.8	204.0
		Adjusted Residual	-5.5	.0	5.2	
	Four-year + colleges	Count	45	4	110	159
		Expected Count	25.8	3.9	129.2	159.0
		Adjusted Residual	5.5	.0	-5.2	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	30.355(a)	2	.000
Likelihood Ratio	30.932	2	.000
Linear-by-Linear Association	29.741	1	.000
N of Valid Cases	363		

(a) 1 cells (16.7%) have expected count less than 5. The minimum expected count is 3.94.

Table 25: Institutional Differences: Two-year v. Four-year Colleges: Online teaching can accommodate other life needs.

			Life Needs			
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	Total
2-year or 4-year	Two-year colleges	Count	33	27	125	185
		Expected Count	31.5	19.7	133.8	185.0
		Adjusted Residual	.4	2.6	-2.2	
	Four-year + colleges	Count	23	8	113	144
		Expected Count	24.5	15.3	104.2	144.0
		Adjusted Residual	-.4	-2.6	2.2	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.715(a)	2	.021
Likelihood Ratio	8.170	2	.017
Linear-by-Linear Association	2.240	1	.134
N of Valid Cases	329		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 15.32.

Table 26: Institutional Differences: Two-year v. Four-year Colleges: Online teaching can provide an opportunity to teach in a new subject area.

			New Subject Area			
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	Total
2-year or 4-year	Two-year colleges	Count	64	26	75	165
		Expected Count	55.6	22.0	87.5	165.0
		Adjusted Residual	2.1	1.4	-2.9	
	Four-year + colleges	Count	37	14	84	135
		Expected Count	45.5	18.0	71.6	135.0
		Adjusted Residual	-2.1	-1.4	2.9	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.411(a)	2	.015
Likelihood Ratio	8.467	2	.015
Linear-by-Linear Association	7.070	1	.008
N of Valid Cases	300		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 18.00.

Table 27: Institutional Differences: Two Year v. Four-year Colleges: Online Teaching can provide an opportunity to reflect on classroom teaching.

			Reflect and Think Classroom Teaching			
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	Total
2-year or 4-year	Two-year colleges	Count	15	16	161	192
		Expected Count	21.5	17.5	153.0	192.0
		Adjusted Residual	-2.2	-.6	2.2	
	Four-year + colleges	Count	23	15	110	148
		Expected Count	16.5	13.5	118.0	148.0
		Adjusted Residual	2.2	.6	-2.2	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.716(a)	2	.057
Likelihood Ratio	5.674	2	.059
Linear-by-Linear Association	5.651	1	.017
N of Valid Cases	340		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 13.49.

Table 28: Institutional Differences: Two-year v. Four-year Colleges: Online teaching can promote job security.

			Promote "Job Security."			
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	Total
2-year or 4-year	Two-year colleges	Count	31	31	121	183
		Expected Count	40.2	31.6	111.3	183.0
		Adjusted Residual	-2.5	-.2	2.3	
	Four-year + colleges	Count	39	24	73	136
		Expected Count	29.8	23.4	82.7	136.0
		Adjusted Residual	2.5	.2	-2.3	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.907(a)	2	.032
Likelihood Ratio	6.860	2	.032
Linear-by-Linear Association	6.722	1	.010
N of Valid Cases	319		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 23.45.

Table 29: Institutional Differences: Two-year v. Four-year Colleges: Online teaching may be a condition of your employment.

			Employment			Total
			Does not increase my desire to teach online	Neutral	Increases my desire to teach online	
2-year or 4-year	Two-year colleges	Count	73	13	41	127
		Expected Count	61.6	13.3	52.1	127.0
		Adjusted Residual	2.9	-.1	-2.9	
	Four-year + colleges	Count	43	12	57	112
		Expected Count	54.4	11.7	45.9	112.0
		Adjusted Residual	-2.9	.1	2.9	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.507(a)	2	.009
Likelihood Ratio	9.569	2	.008
Linear-by-Linear Association	9.466	1	.002
N of Valid Cases	239		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.72

Disadvantages/Demotivators

Table 30: Descriptive Statistics for Demotivators for Teaching Online

	N	Mean	SD
There may be inadequate compensation…			
54. ...for online course development.	296	4.15	2.29
56. ... for online course revision.	307	4.14	2.26
55. ... for online teaching.	300	4.07	2.31
46. Students may lack adequate access to participate effectively in online courses.	314	3.84	2.00
60. The campus administration may not recognize the effort required to teach online.	289	3.82	2.30
52. Online teaching may take more time than classroom teaching.	319	3.71	2.24
50. Inadequate time to develop a new online.	288	3.64	2.13
39. A lack of recognition of online teaching in regards to considerations for promotion and/or salary increase.	260	3.61	2.13
51. Inadequate time to revise online courses.	297	3.59	2.10
42. The absence of face-to-face interaction with students can be a disadvantage.	319	3.53	2.09
45. Inadequate technical support for online course teaching.	284	3.42	2.21
44. Inadequate technical support for online course development.	276	3.37	2.24
38. A lack of recognition of online teaching in regards to tenure considerations.	239	3.35	2.09
48. There may be little or no opportunity to experiment with the technology for teaching online prior to committing to teach online.	307	3.33	2.01
40. Developing an online course can be complicated.	319	3.27	2.01
49. Inadequate time to learn about online teaching.	291	3.24	1.99
53. Concerns about intellectual property and teaching online.	310	3.20	2.08
47. There may be little or no opportunity to observe other faculty using technology for online teaching prior to committing to teach online.	303	3.17	1.91
59. The campus administration may not value online teaching.	281	3.06	2.06
57. Concerns that online course offerings may reduce the quality of our institution's reputation.	302	2.87	1.94
43. Effective pedagogy for online teaching may be unfamiliar.	314	2.86	1.71
41. The technology involved in online teaching can be confusing.	321	2.85	1.83
58. Colleagues may talk negatively about online teaching.	300	2.58	1.87

Note: Range = 1 (not a demotivator) to 7 (strongest demotivator)

Table 31: Age Differences – A Lack of Recognition of Online Teaching in Regards to Tenure Considerations

			Lack of Recognition (Tenure)			Total
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	
Age 2	Under 45	Count	29	19	27	75
		Expected Count	37.0	18.2	19.8	75.0
		Adjusted Residual	-2.3	.3	2.3	
	45 or older	Count	83	36	33	152
		Expected Count	75.0	36.8	40.2	152.0
		Adjusted Residual	2.3	-.3	-2.3	
Total		Count	112	55	60	227
		Expected Count	112.0	55.0	60.0	227.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.522(a)	2	.038
Likelihood Ratio	6.450	2	.040
Linear-by-Linear Association	6.478	1	.011
N of Valid Cases	227		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 18.17.

Table 32: Age Differences: A Lack of Recognition of Online Teaching in Regards to Considerations for Promotion and/or Salary Increase

			Lack of Recognition (Promotion and Salary)			Total
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	
Age 2	Under 45	Count	27	19	32	78
		Expected Count	34.6	18.7	24.7	78.0
		Adjusted Residual	-2.1	.1	2.1	
	45 or older	Count	82	40	46	168
		Expected Count	74.4	40.3	53.3	168.0
		Adjusted Residual	2.1	-.1	-2.1	
Total		Count	109	59	78	246
		Expected Count	109.0	59.0	78.0	246.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.557(a)	2	.062
Likelihood Ratio	5.533	2	.063
Linear-by-Linear Association	5.524	1	.019
N of Valid Cases	246		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 18.71.

Table 33: Age Differences: Online Teaching May Not Be Valued By Campus Administration.

			Not Valued by Campus Administration			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Age 2	Under 45	Count	40	16	27	83
		Expected Count	50.2	11.9	20.9	83.0
		Adjusted Residual	-2.8	1.6	1.9	
	45 or older	Count	121	22	40	183
		Expected Count	110.8	26.1	46.1	183.0
		Adjusted Residual	2.8	-1.6	-1.9	
Total		Count	161	38	67	266
		Expected Count	161.0	38.0	67.0	266.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.718(a)	2	.021
Likelihood Ratio	7.629	2	.022
Linear-by-Linear Association	6.354	1	.012
N of Valid Cases	266		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.86.

Table 34: Age Differences: Some people say that online courses are of an inferior quality compared to classroom-based courses.

			Inferior Quality			Total
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	
Age 2	Under 45	Count	49	10	27	86
		Expected Count	55.2	11.0	19.9	86.0
		Adjusted Residual	-1.7	-.4	2.2	
	45 or older	Count	137	27	40	204
		Expected Count	130.8	26.0	47.1	204.0
		Adjusted Residual	1.7	.4	-2.2	
Total		Count	186	37	67	290
		Expected Count	186.0	37.0	67.0	290.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.738(a)	2	.094
Likelihood Ratio	4.561	2	.102
Linear-by-Linear Association	4.132	1	.042
N of Valid Cases	290		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.97.

Table 35: Tenured v. Untenured Faculty: There may be inadequate compensation for online course development.

			Inadequate Compensation (Course Development)			Total
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	
Tenure	Untenured	Count	75	23	102	200
		Expected Count	82.6	23.9	93.5	200.0
		Adjusted Residual	-1.9	-.3	2.1	
	Tenured	Count	46	12	35	93
		Expected Count	38.4	11.1	43.5	93.0
		Adjusted Residual	1.9	.3	-2.1	
Total		Count	121	35	137	293
		Expected Count	121.0	35.0	137.0	293.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.730(a)	2	.094
Likelihood Ratio	4.758	2	.093
Linear-by-Linear Association	4.625	1	.032
N of Valid Cases	293		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.11.

Table 36: Tenured v. Untenured Faculty: There may be inadequate compensation for online teaching.

			Inadequate Compensation (Teaching)			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Tenure	Untenured	Count	77	25	105	207
		Expected Count	86.4	27.2	93.4	207.0
		Adjusted Residual	-2.4	-.8	2.9	
	Tenured	Count	47	14	29	90
		Expected Count	37.6	11.8	40.6	90.0
		Adjusted Residual	2.4	.8	-2.9	
Total		Count	124	39	134	297
		Expected Count	124.0	39.0	134.0	297.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.729(a)	2	.013
Likelihood Ratio	8.889	2	.012
Linear-by-Linear Association	8.100	1	.004
N of Valid Cases	297		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.82.

Table 37: Tenured v. Untenured Faculty: There may be inadequate compensation for online course revision.

			Inadequate Compensation (Revision)			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Tenure	Untenured	Count	76	26	106	208
		Expected Count	82.1	30.8	95.1	208.0
		Adjusted Residual	-1.5	-1.7	2.7	
	Tenured	Count	44	19	33	96
		Expected Count	37.9	14.2	43.9	96.0
		Adjusted Residual	1.5	1.7	-2.7	
Total		Count	120	45	139	304
		Expected Count	120.0	45.0	139.0	304.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.749(a)	2	.021
Likelihood Ratio	7.809	2	.020
Linear-by-Linear Association	5.171	1	.023
N of Valid Cases	304		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.21.

Table 38: Full Time/Traditional v. Part Time/Non-Traditional: Online teaching may take more time than classroom teaching.

			More Time			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Full Time - Part Time	Part Time - Non-traditional	Count	95	21	52	168
		Expected Count	82.7	21.2	64.1	168.0
		Adjusted Residual	2.8	-.1	-2.8	
	Full Time - Traditional	Count	61	19	69	149
		Expected Count	73.3	18.8	56.9	149.0
		Adjusted Residual	-2.8	.1	2.8	
Total		Count	156	40	121	317
		Expected Count	156.0	40.0	121.0	317.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.791(a)	2	.012
Likelihood Ratio	8.827	2	.012
Linear-by-Linear Association	8.759	1	.003
N of Valid Cases	317		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 18.80.

Table 39: Online Teaching Experience: Absence of Face-Face Interaction

			Absence of Face-to-Face Interaction			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Experience	One or two times	Count	34	17	33	84
		Expected Count	44.4	12.4	27.2	84.0
		Adjusted Residual	-2.6	1.6	1.6	
	Three or more times	Count	134	30	70	234
		Expected Count	123.6	34.6	75.8	234.0
		Adjusted Residual	2.6	-1.6	-1.6	
Total		Count	168	47	103	318
		Expected Count	168.0	47.0	103.0	318.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.275(a)	2	.026
Likelihood Ratio	7.251	2	.027
Linear-by-Linear Association	5.203	1	.023
N of Valid Cases	318		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.42.

Table 40: Online Teaching Experience: Effective pedagogy for online teaching may be unfamiliar.

			Unfamiliar Effective Pedagogy			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Experience	One or two times	Count	48	16	21	85
		Expected Count	55.1	14.9	14.9	85.0
		Adjusted Residual	-1.9	.4	2.0	
	Three or more times	Count	155	39	34	228
		Expected Count	147.9	40.1	40.1	228.0
		Adjusted Residual	1.9	-.4	-2.0	
Total		Count	203	55	55	313
		Expected Count	203.0	55.0	55.0	313.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.749(a)	2	.093
Likelihood Ratio	4.556	2	.102
Linear-by-Linear Association	4.664	1	.031
N of Valid Cases	313		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.94.

Table 41: Online Teaching Experience: There may be little or no opportunity to observe other faculty using technology for online teaching prior to committing to teach online.

			Little or No Opportunity to Observe			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Experience	One or two times	Count	42	12	30	84
		Expected Count	48.4	14.5	21.1	84.0
		Adjusted Residual	-1.7	-.8	2.6	
	Three or more times	Count	132	40	46	218
		Expected Count	125.6	37.5	54.9	218.0
		Adjusted Residual	1.7	.8	-2.6	
Total		Count	174	52	76	302
		Expected Count	174.0	52.0	76.0	302.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.898(a)	2	.032
Likelihood Ratio	6.608	2	.037
Linear-by-Linear Association	5.297	1	.021
N of Valid Cases	302		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.46.

Table 42: Online Teaching Experience: There may be little or no opportunity to experiment with the technology for teaching online prior to committing to teach online.

			No Opportunity to Experiment with Technology			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Experience	One or two times	Count	42	9	31	82
		Expected Count	45.8	13.4	22.8	82.0
		Adjusted Residual	-1.0	-1.5	2.4	
	Three or more times	Count	129	41	54	224
		Expected Count	125.2	36.6	62.2	224.0
		Adjusted Residual	1.0	1.5	-2.4	
Total		Count	171	50	85	306
		Expected Count	171.0	50.0	85.0	306.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.463(a)	2	.039
Likelihood Ratio	6.389	2	.041
Linear-by-Linear Association	3.180	1	.075
N of Valid Cases	306		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 13.40.

Table 43: Online Teaching Experience: There may be inadequate time to learn about online teaching

			Inadequate Time to Learn			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Experience	One or two times	Count	46	5	29	80
		Expected Count	45.5	11.0	23.4	80.0
		Adjusted Residual	.1	-2.3	1.6	
	Three or more times	Count	119	35	56	210
		Expected Count	119.5	29.0	61.6	210.0
		Adjusted Residual	-.1	2.3	-1.6	
Total		Count	165	40	85	290
		Expected Count	165.0	40.0	85.0	290.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.380(a)	2	.041
Likelihood Ratio	7.076	2	.029
Linear-by-Linear Association	.562	1	.453
N of Valid Cases	290		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.03.

Table 44: Online Teaching Experience: There may be inadequate compensation for online course development.

			Inadequate Compensation (Course Development)			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Experience	One or two times	Count	24	6	45	75
		Expected Count	30.9	8.9	35.2	75.0
		Adjusted Residual	-1.9	-1.2	2.6	
	Three or more times	Count	98	29	94	221
		Expected Count	91.1	26.1	103.8	221.0
		Adjusted Residual	1.9	1.2	-2.6	
Total		Count	122	35	139	296
		Expected Count	122.0	35.0	139.0	296.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.950(a)	2	.031
Likelihood Ratio	6.986	2	.030
Linear-by-Linear Association	5.645	1	.018
N of Valid Cases	296		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.87.

Table 45: Online Teaching Experience: There may be inadequate compensation for online teaching.

			Inadequate Compensation (Teaching)			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Experience	One or two times	Count	26	8	45	79
		Expected Count	32.9	10.3	35.8	79.0
		Adjusted Residual	-1.8	-.9	2.4	
	Three or more times	Count	99	31	91	221
		Expected Count	92.1	28.7	100.2	221.0
		Adjusted Residual	1.8	.9	-2.4	
Total		Count	125	39	136	300
		Expected Count	125.0	39.0	136.0	300.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.853(a)	2	.054
Likelihood Ratio	5.840	2	.054
Linear-by-Linear Association	5.113	1	.024
N of Valid Cases	300		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.27.

Table 46: Online Teaching Experience: Concerns that offering online education can reduce an institutions reputation.

			Reduce Institution's Reputation			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Experience	One or two times	Count	49	6	22	77
		Expected Count	49.4	11.5	16.1	77.0
		Adjusted Residual	-.1	-2.0	1.9	
	Three or more times	Count	144	39	41	224
		Expected Count	143.6	33.5	46.9	224.0
		Adjusted Residual	.1	2.0	-1.9	
Total		Count	193	45	63	301
		Expected Count	193.0	45.0	63.0	301.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.436(a)	2	.040
Likelihood Ratio	6.766	2	.034
Linear-by-Linear Association	1.025	1	.311
N of Valid Cases	301		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.51.

Table 47: Voluntariness: The technology involved in online teaching can be confusing.

			Confusing Technology			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Voluntariness	I was required	Count	32	9	19	60
		Expected Count	39.1	9.2	11.8	60.0
		Adjusted Residual	-2.1	-.1	2.6	
	I volunteered	Count	177	40	44	261
		Expected Count	169.9	39.8	51.2	261.0
		Adjusted Residual	2.1	.1	-2.6	
Total		Count	209	49	63	321
		Expected Count	209.0	49.0	63.0	321.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.026(a)	2	.030
Likelihood Ratio	6.457	2	.040
Linear-by-Linear Association	6.515	1	.011
N of Valid Cases	321		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.16.

Table 48: Voluntariness: The absence of face-to-face interaction with students can be a disadvantage.

			Absence of Face-to-Face Interaction			Total
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	
Voluntariness 1	I was required	Count	26	4	27	57
		Expected Count	30.0	8.4	18.6	57.0
		Adjusted Residual	-1.2	-1.8	2.6	
	I volunteered	Count	142	43	77	262
		Expected Count	138.0	38.6	85.4	262.0
		Adjusted Residual	1.2	1.8	-2.6	
Total		Count	168	47	104	319
		Expected Count	168.0	47.0	104.0	319.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.101(a)	2	.017
Likelihood Ratio	8.223	2	.016
Linear-by-Linear Association	4.053	1	.044
N of Valid Cases	319		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.40.

Table 49: Voluntariness: Students may lack adequate access to participate effectively in online courses.

			Students Lack Adequate Access			Total
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	
Voluntariness 1	I was required	Count	20	5	31	56
		Expected Count	24.8	9.3	21.9	56.0
		Adjusted Residual	-1.4	-1.7	2.7	
	I volunteered	Count	119	47	92	258
		Expected Count	114.2	42.7	101.1	258.0
		Adjusted Residual	1.4	1.7	-2.7	
Total		Count	139	52	123	314
		Expected Count	139.0	52.0	123.0	314.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.081(a)	2	.018
Likelihood Ratio	8.127	2	.017
Linear-by-Linear Association	4.998	1	.025
N of Valid Cases	314		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.27.

Table 50: Voluntariness: There may be little or no opportunity to experiment with the technology for teaching online prior to committing to teach online.

			No Opportunity to Experiment with Technology			Total
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	
Voluntariness 1	I was asked/required	Count	24	7	24	55
		Expected Count	30.6	9.1	15.2	55.0
		Adjusted Residual	-2.0	-.9	2.9	
	I volunteered	Count	147	44	61	252
		Expected Count	140.4	41.9	69.8	252.0
		Adjusted Residual	2.0	.9	-2.9	
Total		Count	171	51	85	307
		Expected Count	171.0	51.0	85.0	307.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.515(a)	2	.014
Likelihood Ratio	7.958	2	.019
Linear-by-Linear Association	6.938	1	.008
N of Valid Cases	307		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.14.

Table 51: Voluntariness: Inadequate time to learn about online teaching

			Inadequate Time to Learn			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Voluntariness 1	I was asked/required	Count	19	10	23	52
		Expected Count	29.5	7.3	15.2	52.0
		Adjusted Residual	-3.2	1.2	2.6	
	I volunteered	Count	146	31	62	239
		Expected Count	135.5	33.7	69.8	239.0
		Adjusted Residual	3.2	-1.2	-2.6	
Total		Count	165	41	85	291
		Expected Count	165.0	41.0	85.0	291.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.618(a)	2	.005
Likelihood Ratio	10.528	2	.005
Linear-by-Linear Association	9.969	1	.002
N of Valid Cases	291		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.33.

Table 52: Voluntariness: Inadequate time to develop a new online course

			Inadequate Time to Develop A New Online Course			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Voluntariness 1	I was asked/required	Count	16	7	28	51
		Expected Count	25.1	6.4	19.5	51.0
		Adjusted Residual	-2.8	.3	2.7	
	I volunteered	Count	126	29	82	237
		Expected Count	116.9	29.6	90.5	237.0
		Adjusted Residual	2.8	-.3	-2.7	
Total		Count	142	36	110	288
		Expected Count	142.0	36.0	110.0	288.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.646(a)	2	.013
Likelihood Ratio	8.702	2	.013
Linear-by-Linear Association	8.591	1	.003
N of Valid Cases	288		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.38.

Table 53: Voluntariness: The campus administration may not recognize the effort required to teach online.

			Not Recognized by Campus Administration			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
Voluntariness 1	I was required	Count	16	11	27	54
		Expected Count	24.5	6.5	23.0	54.0
		Adjusted Residual	-2.6	2.1	1.2	
	I volunteered	Count	115	24	96	235
		Expected Count	106.5	28.5	100.0	235.0
		Adjusted Residual	2.6	-2.1	-1.2	
Total		Count	131	35	123	289
		Expected Count	131.0	35.0	123.0	289.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.215(a)	2	.016
Likelihood Ratio	8.093	2	.017
Linear-by-Linear Association	4.035	1	.045
N of Valid Cases	289		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.54.

Table 54: Voluntariness: Some people say that online courses are of an inferior quality compared to classroom-based courses.

			Inferior Quality			Total
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	
Voluntariness 1	I was required	Count	27	12	18	57
		Expected Count	35.8	7.6	13.7	57.0
		Adjusted Residual	-2.7	1.9	1.5	
	I volunteered	Count	167	29	56	252
		Expected Count	158.2	33.4	60.3	252.0
		Adjusted Residual	2.7	-1.9	-1.5	
Total		Count	194	41	74	309
		Expected Count	194.0	41.0	74.0	309.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.536(a)	2	.023
Likelihood Ratio	7.240	2	.027
Linear-by-Linear Association	5.164	1	.023
N of Valid Cases	309		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.56.

Table 55: Two-year and Four-year Faculty: A lack of recognition of online teaching in regards to tenure considerations.

			Lack of Recognition (Tenure)			Total
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	
2-year or 4-year	Two-year colleges	Count	75	28	28	131
		Expected Count	63.6	30.7	36.7	131.0
		Adjusted Residual	3.0	-.8	-2.5	
	Four-year colleges	Count	41	28	39	108
		Expected Count	52.4	25.3	30.3	108.0
		Adjusted Residual	-3.0	.8	2.5	
Total		Count	116	56	67	239
		Expected Count	116.0	56.0	67.0	239.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.647(a)	2	.008
Likelihood Ratio	9.711	2	.008
Linear-by-Linear Association	9.431	1	.002
N of Valid Cases	239		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 25.31.

Table 56: Two-year and Four-year Faculty: The technology involved in online teaching can be confusing.

			Confusing Technology			Total
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	
2-year or 4-year	Two-year colleges	Count	125	34	22	181
		Expected Count	117.8	27.6	35.5	181.0
		Adjusted Residual	1.7	2.0	-3.8	
	Four-year colleges	Count	84	15	41	140
		Expected Count	91.2	21.4	27.5	140.0
		Adjusted Residual	-1.7	-2.0	3.8	
Total		Count	209	49	63	321
		Expected Count	209.0	49.0	63.0	321.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.168(a)	2	.000
Likelihood Ratio	16.229	2	.000
Linear-by-Linear Association	8.429	1	.004
N of Valid Cases	321		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 21.37.

Table 57: Two-year and Four-year Faculty: Inadequate time to revise online courses

			Inadequate Time to Revise			
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	Total
2-year or 4-year	Two-year colleges	Count	85	29	53	167
		Expected Count	81.5	21.9	63.5	167.0
		Adjusted Residual	.8	2.4	-2.5	
	Four-year colleges	Count	60	10	60	130
		Expected Count	63.5	17.1	49.5	130.0
		Adjusted Residual	-.8	-2.4	2.5	
Total		Count	145	39	113	297
		Expected Count	145.0	39.0	113.0	297.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.539(a)	2	.008
Likelihood Ratio	9.807	2	.007
Linear-by-Linear Association	3.121	1	.077
N of Valid Cases	297		

(a) 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.07.

Table 58: Computer Skill Level: There may be inadequate compensation for online course development.

			Inadequate Compensation (Course Development)			Total
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	
Computer Skill	Low	Count	8	9	7	24
		Expected Count	9.9	2.8	11.3	24.0
		Adjusted Residual	-.8	4.1	-1.8	
	Medium	Count	59	13	63	135
		Expected Count	55.6	16.0	63.4	135.0
		Adjusted Residual	.8	-1.1	-.1	
	High	Count	55	13	69	137
		Expected Count	56.5	16.2	64.3	137.0
		Adjusted Residual	-.3	-1.2	1.1	
Total		Count	122	35	139	296
		Expected Count	122.0	35.0	139.0	296.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.124(a)	4	.002
Likelihood Ratio	12.547	4	.014
Linear-by-Linear Association	.697	1	.404
N of Valid Cases	296		

(a) 1 cells (11.1%) have expected count less than 5. The minimum expected count is 2.84.

Table 59: Computer Skill Level: The campus administration may not recognize the effort required to teach online.

			Not Recognized by Campus Administration			Total
			Does not decrease my desire to teach online	Neutral	Decreases my desire to teach online	
Computer Skill	Low	Count	18	1	5	24
		Expected Count	10.9	2.9	10.2	24.0
		Adjusted Residual	3.0	-1.2	-2.2	
	Medium	Count	60	16	55	131
		Expected Count	59.4	15.9	55.8	131.0
		Adjusted Residual	.1	.0	-.2	
	High	Count	53	18	63	134
		Expected Count	60.7	16.2	57.0	134.0
		Adjusted Residual	-1.8	.6	1.4	
Total		Count	131	35	123	289
		Expected Count	131.0	35.0	123.0	289.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.396(a)	4	.034
Likelihood Ratio	10.690	4	.030
Linear-by-Linear Association	6.629	1	.010
N of Valid Cases	289		

(a) 1 cells (11.1%) have expected count less than 5. The minimum expected count is 2.91.

Table 60: Factor Pattern Matrix: Motivators

	Learning	Profession	Flexibility	Access	Novelty
Experiment with New Pedagogy	*.763*	-.116	-.216	-.101	-.123
Reflect and Think Classroom Teaching	*.708*	-.011	-.156	-.112	-.025
Gain New Knowledge	*.684*	-.026	-.144	-.150	-.163
Experiment with New Assessment.	*.573*	.150	-.154	-.049	-.163
High Level of Interaction	*.503*	.102	.164	-.300	-.053
Demonstrate Competencies	.041	*.654*	-.105	.007	.108
Employment	-.215	*.635*	-.106	-.070	-.043
Promote "Job Security."	.132	*.599*	-.103	-.116	.075
Positive Teaching	.122	*.570*	-.009	-.166	-.051
Collaborative Professional Development	.301	*.564*	.156	.017	-.268
Other Material Incentives	-.215	*.508*	-.122	-.133	-.181
Act as a Mentor	.398	*.494*	.104	.018	-.174
Teach a New Subject Area	-.060	*.465*	-.084	-.112	-.241
Students May Want Online Courses	.228	*.315*	-.094	-.141	-.094
Accommodates Other Life Needs	-.004	.051	*-.760*	-.057	-.099
Reduce commuting time or hassle	.025	.146	*-.679*	-.095	.053
Provides Flexible Teaching Environment	.167	-.107	*-.671*	-.102	-.152
Free Time	.120	.293	*-.527*	.040	-.011
Reach Students with Different Culture	-.021	-.037	-.041	*-.985*	.030
Reach Students with Different Location	.021	-.017	-.094	*-.895*	.044
Reach Students at Different Learning Stage	.052	.092	.070	*-.754*	-.074
Learn New Technology	-.090	-.058	-.090	-.030	*-.983*
New Challenge	.205	-.009	-.121	.004	*-.712*
Renew Interest in Teaching	.215	.160	.111	-.103	*-.476*
Reliability (overall .94)	.87	.88	.85	.91	.78

Table 61: Factor Pattern Matrix: Demotivators

	Compensation	Reputation	Complexity	Promotion	Technology
Inadequate Compensation (Course Development)	*.904*	.046	.028	.024	.043
Inadequate Compensation (Teaching)	*.890*	.013	-.023	.067	-.036
Inadequate Compensation (Revision)	*.887*	.020	.084	.045	.049
Inadequate Time to Develop A New Online Course	*.637*	-.021	.041	.001	-.353
Inadequate Time to Revise	*.572*	.015	.065	-.016	-.417
Inadequate Time to Learn	.436	.047	.087	.048	-.453
More Time	*.427*	.200	.254	-.002	-.071
Intellectual Property and Teaching Online	*.335*	.177	.099	.028	-.236
Negative Comment from Colleague	-.033	*.852*	.120	-.033	.004
Negative comments about Inferior Quality	.061	*.834*	.088	.070	.129
Reduce Institution's Reputation.	.039	*.783*	.074	-.058	-.036
Not valued by Campus Administration	.120	*.716*	-.080	.164	-.025
Students Don't Want Online Course	-.080	*.604*	-.044	.030	-.177
Not Recognized by Campus Administration	.435	*.558*	-.053	.123	.148
Complicated Course Development	.042	-.059	*.841*	.151	.106
Confusing Technology	-.005	-.022	*.733*	.134	-.083
Unfamiliar Effective Pedagogy	-.011	.119	*.707*	.032	.027
Absence of Face-to-Face Interaction	.054	.028	*.622*	-.129	-.078
Qpolicies_A_2 Lack of Recognition (Salary Increment)	.028	-.007	.002	*.924*	-.019
Qpolicies_A_1 Lack of Recognition (Tenure)	-.041	.042	.089	*.882*	-.054
Qtechsuppissues_A_2 Inadequate Technical Support on Teaching	.092	.049	-.009	.110	-*.789*
Qtechsuppissues_A_1 Inadequate Technical Support on Course Development	.138	.008	-.012	.127	-*.777*
Qtechsuppissues_A_3 Students Lack Adequate Access	-.010	.159	.287	-.005	-*.498*
Qtechsuppissues_A_5 No Opportunity to Experiment with Technology	.125	.186	.273	.004	-*.465*
Qtechsuppissues_A_4 Little or No Opportunity to Observe	-.025	.325	.245	.032	-*.462*
Reliability (overall .96)	.93	.91	.83	.95	.92