PROFESSOR PERCEPTIONS OF TRAINING FOR THE ONLINE CLASSROOM

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Abstract

As universities transition programs and courses to the online format, there are many factors to consider. Perhaps one of the most important factors to consider when converting courses to the online format is the instructor. The instructor is an integral component of any effective classroom; therefore, it is necessary for universities to prepare their instructors for the demands and unique pedagogy required of the online classroom. The purpose of this study is to convey the perceptions of professors who have received training for transitioning to the online classroom as well as the expectations of professors who will be participating in training for the online classroom. The researcher of this study created and administered a survey to university professors who had participated in the university's online training program and now teach online courses. Their survey included questions about the effectiveness of the university's training, their confidence post-training, and attitude toward the online format. The survey revealed the importance and need for universities to prepare their professors for the transition to the online format. This study will provide universities insight on professor perceptions and expectations when transitioning their programs to the online format.

Keywords: online classroom, professor perceptions, faculty training, online training

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Online education is a relatively new trend in the traditionally steeped discipline of education, especially when considering that formal education in the United States has existed since the 17th century (Gray, 2008). While the one-room schoolhouse no longer dots the landscape, our education system still clings to many of the same pedagogical philosophies that permeated the early days of schooling. As technology intersects our everyday lives, education is being forced to alter its pedagogy. Ironically, the place where some of the most time-honored educational traditions exist is where online education is progressing at a rapid pace (Bucknell, 2016; Thompson, 2017; Wood, 2016). While universities continue to move forward with online education, they need to consider the preparedness and attitude of the professors transitioning from the traditional format to the online format. Understanding how professors are transitioning to the online format is necessary for a successful online program.

The most recent statistics from the National Center for Education Statistics (2016) account for almost six million students enrolled in at least one distance education course. There are just under 3 million enrolled in an online program. Whether the need created the entity, or the entity created the need, online learning is now a driving force in higher education.

Background

The first entirely online course came into existence in 1981 as a non-credit course. Since that time, online courses have turned into online degree programs and fully online universities. The looming presence and growth of online universities have required many traditional brick and mortar universities, known for being rigid and unaltering, to re-think their educational platform (Casement, 2013; Wood, 2014). Traditional Ivy League schools like Harvard, Columbia, and the University of Pennsylvania now offer extension programs that provide students with the opportunity to attend prestigious schools through virtual platforms (Johnson, 2013). Other top universities such as Stanford, Yale, and the University of Michigan offer MOOCs (Massive Open Online Courses), certifications, and continuing education courses online to individuals seeking to enrich their lives without having to be admitted to a rigorous program (Billsbury, 2013; Schaffauser, 2015, Yale University, n.d.).

Statement of the Problem

As with any change in an organization, there will be individuals resistant to the new way of doing things. In higher education, it is the professors who are often resistant to the change (Harrison et al., 2017; Stoker, 2018). Research has unveiled that there is resistance when moving a professor from the traditional classroom to the online classroom (Chancey, 2016; Stoker, 2018). Challenges contributing to professor resistance are communication, high enrollment numbers, time and the impersonal nature of teaching online (Trammell & LaForge, 2017; Wessel, 2016). These hurdles leave professors in a problematic scenario when being required to teach an online class. Universities can alleviate these concerns by evaluating their practices and implementing a well-developed change initiative that includes training their faculty for the dynamic of online classroom.

Statement of Purpose

As with any doctrine, theory or ideology in education, research is necessary to gain a current picture on the status of the subject matter as well as understand where future research is warranted. Current research of online education examines everything from online pedagogy to online efficacy (Chancey, 2018; Cho & Cho, 2016; Colferai, & Gregory, 2015). Research documents that the continuing changes associated with online learning justify the need for future studies.

The purpose of this study is, first, to investigate the training and professional development used by one university transitioning their programs to the online format. Professors that are required to move to their traditional classrooms to the online format are often resistant and not prepared for the change (Brown, 2016; Chancey, 2018; Nicoll, 2016). When universities change their programs to the online format, they must prepare their professors for the online classroom to ensure a successful transition. Second, the research will investigate how professors view the online format. The study will examine what contributes to a professor's confidence as they transition to teaching online. A potential outcome of the study will be to give universities insight on how to prepare professors for the online format to give their students the best opportunity to be successful.

Research Questions

1) How beneficial is professional development in preparing professors to teach online courses?
2) What are professors' perceptions of teaching in the online format?
3) What factors contribute to a professor's confidence in teaching an online course?

Theoretical Framework

The theory embedded throughout the research is the organizational change theory. "Organizational change is the process in which an institution changes its culture, operational methods, structure, strategies or technologies" (Roberts, 2018, p. II). Implementing new programs, whether in an educational or non-educational setting, requires a system change and not just a change of procedure or policy here and there. Engaging in an online program is culture change that requires a university to re-evaluate their course structure, technology utilized for the online format, and strategy for training their professors. Individuals have a natural resistance and fear of change. These uncertainties can be alleviated if universities understand the dynamics of organizational change and how it affects its programs and personnel. Ensuring professors are trained and prepared for the online format is vital to the organizational change when transitioning to the online format.

Significance of The Study

This study will contribute to the growing literature of online education. Specifically, how universities prepare their staff for the online learning classroom. The study will present an additional piece of research to assist universities and instructors in understanding how to support professors transitioning to the online format and build a positive culture towards online education.

Literature Review

The Question of Quality Within Online Education

A review of current literature regarding online education will reveal that there is still much to learn about the medium and its effectiveness as compared to face-to-face format (Bosshard & Chiang, Bucknell, 2016; O'Neill, & Sai, 2014; Tichavsky,

Hunt, Discoll, & Jicha, 2015). Whether courses are taken online or in a traditional classroom, the cost of college continues to rise (Thompson, 2017). The amount of money and time spent on a college education should lead students to ask, "will I receive a quality education from an online course?" Research has addressed the concerns on the effectiveness of online education, but they have not alleviated the apprehensions of students, instructors and the public (Bosshard a& Chiang, 2016).

Studies have revealed that while there are no significant differences in student outcomes between online education courses and brick and mortar classrooms, there are concerns of online education not providing an equal learning experience as its face to face counterpart (Arasaratnam-Smith & Northcote, 2017; Billsbury, J. 2013; Bucknell, 2016; Harrison et al., 2017). The brick and mortar classroom provides students with a physical presence and the ability to know their instructor's personality (Tichavsky, Hunt, Discoll, & Jicha, 2015). Some professors try to replicate the classroom environment through online communities where students can engage in conversations via a discussion board. However, discussion boards cannot replace the immediate responses and non-verbal communication that often permeates a face to face discussion (Arasaratnam- Smith, 2017).

Research on varying universities will declare that not all online instruction is equal. With diverse instructional platforms, faculty training, and pedagogy, a student's online experience can look different from university to university and professor to professor (Springer, 2016). Courses across the disciplines can determine the effectiveness of the online class as well. In a study comparing differences in online discussions between education and engineering students, education students were found to have interactive, social discussions amongst one another, while the engineering students' posts were content related with higher levels of thinking (Redmond, Devine, & Basson, 2014). The differences within discipline is one more variable for professors to navigate when instructing an online course.

The University and The Professor

"As with any instructor at any level, if they (professors) do not have the right attitude about their course, it becomes evident in their teaching" (Stoker, 2018, p.26). This is a concern since many online instructors are former traditional classroom teachers (Harrison et al., 2017; Trammell & LaForge, 2017). How they transition to the online environment is vital to their students' success.

Many of those challenges for professors moving to the online format can be eased through proper training by the university. Several studies call attention to the fact that many professors are not prepared for the online format (Brown, 2016; Chancey, 2018; Nicoll, 2016; Vilkas, 2017). Providing professor support should include training on the school's LMS (the technology medium used to deliver the course), course implementation, student expectations, online discourse, and communication with students (Brown, 2016). Managing the online classroom requires an instructor to be actively present and respond when needed.

The Professor and Training

Professional development trainings for teaching online are not as vast as the face to face counterpart; however, the medium is expanding with numerous universities offering their professors support for teaching online. The University of Wisconsin – Madison' s non-credit certification course is available to their students as well as anyone desiring to teach online (University of Wisconsin – Madison, n.d.). Rutgers University also offers an online teaching certificate for those who complete their program (Rutguers University, n.d.). Southern Methodist University and the University of Central Florida provide courses and training to prepare their faculty for the dynamic of teaching online (SMU, n.d.; University of Florida, n.d.). The courses at the above motioned universities enlist similar learning goals that focus on understanding the online learner, preparing course modules, planning online activities, and creating learning objectives.

The university that was the focus of this study requires their faculty to complete their online course. The course is offered at various times throughout the year and is completed entirely online over a six-week period. The course is taught through a series of modules with fellow faculty. The cohort model allows faculty to work as an online class to understand the role of the student as well as the facilitator. Professors participating in the course create activities, collaborate on projects, and facilitate discussion forums. Once the course is completed, the faculty member is certified and able to teach an online course.

There are contradictions within the online education research field regarding the effectiveness of online courses. Some studies conclude that online learning can be just as effective as the traditional classroom (Bosshard & Chiang, 2016). Still, there are concerns that the online classroom cannot replicate the personal nature of the traditional classroom (Arasaratnam- Smith,

2017). More recent research has focused on professor resistance towards the online format, online course design, and professional development for professors who transition to the online format (Brown, 2016; Chancey, 2018; Nicoll, 2016, Springer 2016, Wessel, 2016). These studies may help universities and professors understand what makes an online course successful and possibly bring uniformity to the question of whether or not an online course is as effective as its brick and mortar counterpart.

Methodology

Research Design

This empirical research study utilized a quantitative, cross-sectional survey design. The study investigated the professional development training program at a private university in North Texas. The training is required for professors who desire to teach an online course. Upon completion of the seven-week course, professors receive a certification that allows them to teach online at the university. The course provides professors training on developing engaging course materials, facilitating online discussions, writing student-centered learning objectives, and implementing evidence-based practices in the online format. The researcher created an original survey to reflect professors' perceptions of online education, the training received for teaching online, and their confidence to teach online prior to and after the training. The survey was sent to professors who have participated in the training and are currently teaching online.

Both descriptive statistics and a multiple regression analysis were utilized for this study as the researcher was seeking to understand the factors that contribute to a professor's confidence when teaching in the online format. The study also investigated the factors that contribute to a professor's perception of the online format. This could potentially provide the researcher insight into how effective the university's training program is in preparing professors for teaching online.

Instrumentation

The instrument used to investigate the professor's perceptions, and impact of the training was a Qualtrics survey. An eleven-question Likert scale survey was sent to 39 professors who have previously participated in the university's training program for teaching online. The questions on the survey asked professors about the benefit of the training, their confidence before and after the training, what they will implement from the training, and their perception regarding the effectiveness of online education.

Participants

The participants for the study will include professors from a private university in North Texas who have completed the course required to teach in the online format. The participants are either currently teaching or will teach an online course. The participants' teaching experience ranges from less than three years to more than eleven years.

Data Collection

Surveys were sent to 39 professors via email. A link to the survey was provided in the email to allow participants' response to remain anonymous. Participants were given two weeks to complete the survey. A second email was sent as a reminder mid-way through the allotted time. Twenty-one participants responded to the survey ($n = 21$).

Data Analysis

Descriptive and inferential analyses were utilized for this research using IMB SPSS statistics. Multiple regression is the appropriate analysis for this research scenario as the researcher seeks to understand a potential predicting relationship between select variables and professor confidence in teaching online courses (Fields, 2013). The variables considered for this study are number years teaching, confidence before training, and the professor's perception of the effectiveness of online education (Figure 1). The analysis will determine if any or a combination of all the variables can predict a professor's confidence level after participating in the training.

Data Assumptions

For a researcher's results to be considered valid and trustworthy, certain assumptions regarding the data must be true as

based on the 2006 publication by the American Education Research Association (AERA) entitled *Standards for Reporting on Empirical Social Science Research in AERA publications.* For this study, the following nine data assumptions were met. 1) Variable types were measured as follows: Dependent variable of confidence of teaching online after training was measured using interval values. The independent variable of confidence before training was measured using interval values. The independent variables of effectiveness of online education and years of experience were measured as categorical with two categories for each variable, 2) All variables in the research were composed of multiple values and no variables with zero variance were found, 3) No perfect multicollinearity was found. None of the variables were highly correlated. All variables had correlations of .8 or lower. The highest correlation between variables identified was between confidence before training and confidence after training at .648, 4) All known relevant variables were included in the analysis, 5) Homoscedasticity was achieved. The ZRESID and ZPRED plots revealed no evidence of a relationship between the variables, 6) The independent errors are within the acceptable range of 1-3 at 2.397 on the Durbin-Watson analysis, 7) The ZRESID histogram revealed that the residuals are normally distributed, 8) Independence of observation was achieved. One person's score did not influence another participant's score, 9) The relationship being modeled is assumed to be linear.

Descriptive Statistics

The mean, standard deviation, and measures skewness and kurtosis were measured for the following categorical variables: confidence rating before taking the course, how much of the course they will use, how much of their current course will need to be redesigned, confidence rating after the training, how beneficial the training

was, and their perspective on the effectiveness of online education.

Figure 1: Descriptive Statistics

		Conf prior	Use foot	Redesign course	Conf after	Foot beneficial	Effect ol ed
N	Valid	21	20	21	20	18	21
	Missing	0	1	0	1	3	0
Mean		2.667	3.550	2.000	2.700	3.500	3.286
Std. Deviation		1.017	.826	.633	.923	.515	1.309
Skewness		.129	-1.423	.000	-.214	0.00	-.440
Kurtosis		-1.217	3.893	-.132	-.595	-2.267	-.670
Range		3.00	4.00	2.00	3.00	1.00	4.00

The table, as shown in figure 1, displays the mean, standard deviation, skewness, kurtosis, and range for the survey questions. When comparing the confidence of professors before and after participating in the training, there was a slight increase in the mean. The mean rating before the training was 2.667 with the mean rating after the training was 2.700. With the rating on a scale from 1 - 4, the professors' confidence both before and after the training is closer to the more confident side of the scale. The skewness and kurtosis for both variables were within the normal range of +/-3 (Huck, 2004).

While the increase was minimal, the professors' scores on the value of the training gave more insight to the effectiveness of the course. Professors rank how much of the course they would use on a scale from 0 - 5 with 0 not sure (0 was disregarded in the mean), 1 – nothing, 2 – very few strategies, 3 – select strategies, 4 – many strategies, and 5 – everything. The mean score for course usage was 3.550 (Figure 1). While the skewness and kurtosis were within the normal range, the skewness was pulled toward the lower end of the scores and the kurtosis was leptokurtic indicating the range of scores were narrow and focused around the mean. This is supported by the standard deviation at .826.

In addition to determining how much of the course professors would implement, they were also asked if the course was beneficial for teaching an online. Professors were asked to rank their responses on a scale of 1- 4 with 1 being strongly disagree and 4 agree. There was also an option for participants to answer, 'neither agree nor disagree.' The three 'neither agree nor disagree' responses were not calculated in the score. The mean score for the benefit of the course was 3.500 (Figure 1). No participants answered with a score of 1 or 2. The skewness for this data was symmetrical; however, at -2.267 the kurtosis was

platykurtic representing a wider bell shape. The relatively small standard deviation supports the distributional shape.

An additional question asked of the professors was if they would need to redesign their course to meet the needs of the online format. The choices were 1 – no redesign, 2 – some redesign needed, and 3 – completely redesign the course. This question gave the researcher added information as to the effectiveness of the training as professors may now realize that their traditional course cannot be simply transferred to the online format. With a mean of 2.00, it is evident that professors understand some of their course will need to be redesigned for the online format. The skewness and kurtosis are normal and slight at .000 and -.132, respectively.

The professors' perspective regarding the effectiveness of online education does not directly relate to their impressions of the course; however, it is an appropriate assessment for those teaching an online course. On the survey, professors were asked to rank the following statement on a scale from 1 – 5 with 1 being strongly disagree and 5 being strongly agree: "Online courses offer an equally effective education as their face to face counterpart"

(Stoker, Qualtrics, 2019). The mean value for the professors' ranking was 3.286. The mean value indicates that as a group, professors have a more favorable view on the effectiveness of online education when compared to the face to

face format. Both the skewness and kurtosis were within the normal range of +/- 3 (Huck, 2004). While the scores are not a perfect bell shape curve, they are nearly an even distribution of scores. This shows that there are still individual professors who do not view online education as effective as the traditional classroom.

Inferential Statistics

An ANOVA (Figure 2) was conducted to determine if the independent variables have an effect on the dependent variable. The model revealed a statistically significant result, $F(3,17) = 3.399$, $p = .048$. Since $p < .05$, it can be concluded that together, the independent variables are statistically significant as predictors of a professor's confidence post training. For this research scenario, the null hypothesis is rejected.

Figure 2: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.743	3	2.248	3.399	.048[b]
	Residual	9.257	14	.661		
	Total	16.000	17			
a. Dependent Variable: Conf after						
b. Predictors: (Constant), Effectiveness, Years exp, Conf prior						

Figure 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.649[a]	.421	.297	.81317	2.413
a. Predictors: (Constant), Years_exp, Effectiveness, Conf_prior					
b. Dependent Variable: Conf_after					

When considering the effect size, together the effectiveness of online education, years of experience, and confidence prior to training can predict forty-two percent of the confidence a professor will have once they have completed the training (Figure 3). The best predictor (Figure 4) of a professor's confidence after training is confidence before training (.608), followed by years of experience (.061), and their perspective of online education (.035).

Figure 4: Coefficients/Effect Size

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.886	1.076		.824	.424
	Conf_prior	.608	.192	.645	3.162	.007
	Effectiveness	.035	.428	.017	.082	.936
	Years_exp	.061	.394	.031	.154	.880
a. Dependent Variable: Conf_after						

Findings

The first research question guiding this study was on the benefit of professor training for the online. Whether you consider the raw data, inferential analysis, or descriptive statistics, it is evident that the majority of participants from this study view their professional development as valuable when transitioning from the face to face to the online format. The increase in confidence should empower professors when transitioning their face to face pedagogy to the online format.

A second research questions for this study was on professor perceptions regarding the effectiveness of online education versus the traditional face-to-face format. Nineteen percent of professors strongly agree that the online format can deliver the same quality of instruction as the face-to face-format. Fourteen percent strongly disagree. The rest of the participants responses fell in the middle. While these results may present a view that is leaning towards the more favorable view on the effectiveness of online education, it is evident that not all professors perceive the format as an equal medium.

The third research question for this study considered the factors that contribute to a professor's confidence when teaching an online course. The results of the multiple regression analysis indicated that the confidence of a professor before the training is the strongest predictor of the confidence they will have after the training. This is supported by the small increase in the mean between professor confidence in teaching online before the training (2.667) and after (2.700). When considering the raw data from the surveys, sixty-two percent of professors were either 'somewhat confident' or 'confident' when rating their confidence in teaching online – before to the training. Twenty-nine percent ranked themselves as 'very confident.' The numbers after the training revealed that seventy-five percent of the professors believed they were either 'somewhat more confident' or 'more confident' of their ability to teach online as a result of the training. It is evident that the training did have an impact on their confidence when teaching online, even if they had confidence going into the training. While the professors' perceptions of online education and years of experience teaching were much less of a predictor, they can still be considered a contributing factor when combined with confidence prior to the training.

Limitations of the Study

Researchers who rely on participants to give opinions and perceptions are subjected to the possibility of the said participant not giving full disclosure in their responses. This study will survey professors on their views and training about online education. While the participants' identity will be protected, it is possible that fear of retribution or loss of their position may lead professors to be guarded with their answers. The same can be said of the universities. It is possible that they will either not respond to the survey or not answer all of the questions. This could also affect the sample size. Obtaining a large sample size will ensure a worthwhile contribution to the research pool of online education.

Discussion

When considering the first research question regarding the benefit of preparing professors to teach online, the results of this study aligned with other research, "Training that instructors received in online pedagogy was also seen as beneficial because it empowered instructors to easily transfer on-ground practices into an online environment" (Spring, 2016). Properly preparing professors and courses for the online format will result in a successful online program, which will equate in student success.

The second research question for this study was to evaluate professors' perceptions on the effectiveness of online education. Previous studies revealed that professors do not agree about the effectiveness of online education (Nicoll, 2016; Spring, 2016; Stoker, 2018). The data from this study supports the idea that professors are still divided in this area.

The third research question evaluated a professor's confidence in teaching an online course. The survey analysis revealed that professors who participated in the training felt more confident about their ability to teach online. Years of experience and a professor's perception regarding the effectiveness of online education also contributes to their confidence. It would seem logical that professors who have a favorable view of online education would feel more confident about the engaging in the new medium.

Conclusion

This relatively new component of online education in colleges and universities is here to stay. If universities are going to embrace the world of online learning, they must consider all the elements of organizational change including preparing their professors for teaching online (Chancey, 2018; Nicoll, 2016, Springer 2016, Wessel, 2016). The survey given to professors at a private university in North Texas indicates that training for the online format is a worthwhile investment. With the exception of a few outliers, professors believe they benefited from the training and will use many of the components covered in the training. The positive response should encourage university administrators to require training, as well as ongoing support, for their professors who will teach an online course.

Professors, university administrators, and instructional specialist will benefit from this study as it supports the idea that professional development is necessary for a successful online course. Professors should be encouraged that training for the online format does assist with increased confidence. University administrators should consider the positive results of this study as a motivation to include training for their professors moving to the online format. Instructional specialist who assist professors with professional development should continue to train as well as provide resources to professors teaching online for sustainability. Further research could determine if all professors, courses, and students are suited for the online format. Online education is the new norm for higher education; however, that should not result in the elimination of the traditional brick and mortar classroom.

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