

## Faculty Perspective: Training and Course Development for the Online Classroom

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### Abstract

This quantitative study focused on the perceptions of faculty currently instructing online. The sample consisted of a random selection of instructors teaching at least one online class in the Fall of 2008. Of the 300 people surveyed, 111 responded, constituting a 37% response rate. Although researchers tout the importance of training prior to teaching online, this study found that a large percentage of instructors are not receiving any training in pedagogy or technology prior to instructing their first online course. Findings also indicate that current online instructors desire ongoing training opportunities in technology and pedagogy, believe that it is difficult to convert a course from face-to-face to totally online, and think training should be required prior to instructing online for the first time. Additionally, a significant difference was found in the perceived preparation of instructors in both technology and pedagogy as a result of training prior to instructing online.

**Keywords:** online learning, training, instructional design, professional development, online course development, faculty preparation

### Introduction

#### *Purpose of the Study*

This study investigates the perceptions of faculty currently facilitating instruction in the online environment. Although studies exist focusing on instructors' satisfaction with instructing in the online format (Awalt, 2003; Conrad, 2004; Dolloph, 2004; Luck & McQuiggan, 2006; Wang, MacArthur, Crosby, 2003; Wilkes, Simon, Brooks, 2006), additional research focusing on faculty perspectives represents an important aspect of gaining a thorough understanding of the online format from a research standpoint. For example, current research fails to adequately scrutinize the difficulty associated with taking a face-to-face course and moving it to the online format, the perceived effects of technical and pedagogical training on the quality of instruction, the formats in which faculty prefer to be trained, and whether or not current online instructors believe training should be required prior to instructing online. Through this study the researcher attempts to address these issues by quantitatively assessing the beliefs of current online instructors.

The results of this study present valuable information for institutions looking to formalize online learning programs. Additionally, this study allows faculty considering and currently teaching online to view the beliefs and perceptions of experienced online instructors. Lastly, because the majority of institutions lack a formal training requirement for new online instructors (Kosak et al., 2005; Ray, 2009), this study assists institutions in determining the value in dictating training courses for instructors new to the online format and aids current faculty in the decision of whether or not to seek training prior to instructing their first online course.

#### *The Problem*

Evidence of considerable growth exists in the number of students selecting courses in the online format in the United States. For example, between 2005 and 2006, the number of students participating in online courses increased by 10 percent, resulting in approximately 20 percent of students claiming enrollment in at least one class delivered totally online in the fall of 2006 (Allen & Seaman, 2007). With

the rapid increase in the number of students participating in online courses combined with the relative newness of this type of instruction, a number of concerns have arisen as to the effectiveness of this type of instruction. Probably stemming from the negative connotations about online learning, a considerable amount of research focuses on the quality of online instruction as compared to traditional methods of instruction (Shelley, Swartz, & Cole, 2007; Rivera and Rice, 2002; Hauck, 2006). However, a number of other pervasive concerns exist within the online learning domain which deserve copious research as well. For example, researchers document that online instruction requires different instructional and technical tools (Diaz & Botenbal, 2000; Barker, 2003) and therefore training should be required prior to instructing online (Trippe, 2002). However, the majority of instructors new to online learning receive little to no training (Keramidas et al., 2007; Kosak et al., 2005; Ray, 2009), and consequently use the same pedagogical tools utilized in the traditional, face-to-face classroom (Conrad, 2004; Dolloph, 2007; Zemsky & Massey, 2004).

Without faculty demand or empirical evidence about the effects of training on the appropriate online instruction, little will be done at the institutional level to change the current lack of professional development for online instructors. As a means of gaining additional insight into the perception of online faculty, the study was formulated. Through the subsequent review of literature and survey of online faculty the researcher attempts to answer the following research questions and hypotheses.

### *Research Questions*

RQ1: How difficult is it for faculty to convert a course from face-to-face to totally online?

RQ2: Would faculty like additional training opportunities (technical and/or pedagogical) pertaining to online instruction and in what format(s)?

RQ3: Who is providing formal training to faculty currently instructing online?

RQ4: Do current online instructors believe that technical and/or pedagogical training should be required prior to instructing online?

### *Hypotheses*

Ho<sub>1</sub>: Training does not significantly affect an instructor's perceived technical preparation for instructing in the online format at an  $\alpha=.05$  level.

Ha<sub>1</sub>: Training significantly affects an instructor's perceived technical preparation for instructing in the online format at an  $\alpha=.05$  level.

Ho<sub>2</sub>: Training does not significantly affect an instructor's perceived pedagogical/instructional design preparation for instructing in the online format at an  $\alpha=.05$  level.

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### **Literature Survey**

The online learning format is growing rapidly. Unfortunately, for various reasons, institutions continue to promote the implementation of online teaching "without necessarily having staff competent in all aspects of online pedagogy" (Sims, Dobbs, & Hand, 2002, p. 136). With the rapid rise of online courses, questions have been raised as to the capacity of faculty to successfully instruct in the online format.

Unlike teaching face-to-face where instructors may lack technical knowledge and still effectively teach students, in the arena of distance education, educators must possess a thorough understanding of technology as well as the subject matter expertise required in the traditional classroom (Darabi, Sikorski, & Harvey, 2006).

Aside from the obvious technical challenges associated with developing a course in the online medium, researchers indicate a need for additional faculty training specifically focusing on the different methods of instruction and pedagogy necessary to facilitate and instruct a successful online course (Diaz & Bontenbal, 2000; Arabasz, Pirani, & Fawcett, 2003; Okojie, Olinzock, & Okojie-Boulder, 2006). In

contrast, research also indicates that instructors hold the perception that online instruction is similar in design and pedagogy, if not the same as traditional teaching (Diaz & Cartnell, 1999; Alexander & Boud, 2001; Arabasz, Pirani, & Fawcett, 2003). First time online instructors often believe that moving their lectures and their exams to the online format constitutes teaching online (Sieber, 2005). However, Sieber (2005) found that after teaching online, instructors state that besides “mastering the technology,” they must also “master the art of guiding and motivating students” through the course (p. 338). This disconnect fuels the dichotomy of faculty training; that is, first-time instructors feel prepared from a pedagogical perspective to instruct online, even though research suggests that instructors require additional training to successfully conceptualize, design, and deliver an online course.

### *Transitioning to the Online Environment*

Studies indicate that the majority of instructors utilize the same pedagogical tools in the online medium that they learned for face-to-face instruction (Zemsky & Massey, 2004; Conrad, 2004; Dolloph, 2007). Although faculty tend to use the same pedagogical tools in the traditional and online classroom, trying to replicate all of the interaction, activities, and events that take place during a face-to-face classroom within the context of the online medium remains virtually impossible (Sugar, Martindale, & Crawley, 2007). Those new to online instruction cite past experiences in the classroom as providing the means for which they handle online pedagogical issues (Conrad, 2004). However, emulating face-to-face instruction in the online classroom is unfeasible and impractical (Sugar, Martindale, & Crawley, 2007). As a result, expecting “experienced face-to-face faculty to magically begin to function well in the online environment” is unreasonable due to the lack of pedagogical transferability from the traditional to the online classroom (Smith, 2005, p. 11).

This magical understanding of proper instruction in the online format does not occur naturally. According to Gold (2001), an instructional technologist, “without proper pedagogical training and online experience, teachers will continue to replicate their best existing practices onto the online medium” (p. 36). If institutions expect faculty to successfully transition to the web-based classroom, instructors must be educated on best practices in online learning (Li, Lee, Bonk, Su, & Magjuka, 2005).

Additionally, a Bates and Watson (2008) study further emphasized the need for pedagogical training by identifying specific skills that must be attained by instructors to ensure quality online instruction, including, appropriate design of courses, effective use of activities, and a thorough understanding of technology. Bates and Watson pronounced that to successfully instruct online, one cannot “make a physical move from standing in front of a class to typing on a keyboard, and keep everything else the same” (p. 40). In the conclusion of their study of two online instructors, the instructors acknowledged that virtual teaching, whether partially or totally online required a different set of teaching skills and methods.

Finally, a study focused on faculty perceptions of online learning surveyed the population of Penn State University’s World Campus (Luck & McQuiggan, 2006). In this study, the participants provided suggestions to instructors moving into the web-based classroom for the first time. All of the suggestions related to instructor preparation, including viewing a course already in the online format, taking part in online learning as a student, discussing online instruction with someone familiar with taking courses online, becoming comfortable with the technology, and seeking assistance from a technical and design perspective.

### *Failure to Train Online Instructors*

Although researchers document the importance of training instructors prior to teaching online for the first time, the majority of institutions fail to do so (Keramidas et al., 2007). These institutions, partaking in the “individual model of distance education,” force faculty to “fend for themselves in the virtual world,” oftentimes leaving instructors new to online learning feeling “overwhelmed” (Restauri, 2004, p. 33).

Surprisingly, the majority of institutions seem to subscribe to this hands-off model. In fact, a study conducted in the University of North Carolina system (Kosak et al., 2005) found that only half of respondents acknowledged the availability of any type of training pertaining to online instruction at their institution. In the findings of that same study, although half of the institutions provided training opportunities for faculty, a total of only 27% of institutions actually required faculty to train prior to teaching an online course. Related to the lack of training, one faculty member in Lewis’ (2007) study

described her first experience with online instruction as being “thrust into online courses without any preparation” (p. 56). She further indicated the importance of not only offering training to faculty, but making sure that faculty receive adequate information about those opportunities (Lewis, 2007).

Other faculty members confirm the findings of the Lewis (2007) study. For example, in his self-reflection of the importance of training for online instructors, Trippe (2002) fosters the idea that training should not only be available to online instructors, but should be required prior to teaching online for the first time.

#### *Need For Additional Research*

Overall, online learning is still a relatively new concept (Keramidas et al., 2007). Many opportunities exist for additional research in almost all aspects of online education. For example, a lack of research exists that adequately addresses the training needs of online instructors, especially those new to the online format. Hewett and Powers (2007) state that “a gap exists regarding the specific issue of training and professional development” and call for additional “theoretical and empirical research” of “what works in various online settings” (p. 3). Similarly, Bates and Watson (2008) cite a lack of focus in research on how professors learn to instruct in the online format. By gaining perspective on faculty concerns through research, institutions gain opportunities to better understand the type of support that faculty needs (McQuiggan, 2006).

Additionally, of the available published articles focusing on online learning, many lack empirical evidence to justify the claims made by the authors and instead focus on the views of the writers (Clark, 2007). Specifically, a focus on faculty perspectives of online learning (Kinuthia, 2004; Luck & McQuiggan, 2006), particularly in the areas of professional development and preparation for instruction, needs to gain the attention of researchers. The majority of studies thus far focus on a single case study, recommendations based on experiences, and descriptions of practices, thereby lacking themes that can transcend all areas of educational technology (Mishra & Koehler, 2006).

Overall, to provide quality teaching, instructors must know how to foster student learning in the virtual classroom. Unfortunately at this point, the exact prescription for quality instruction in the online environment is still unknown. However, if online learning continues to grow at the expected rates, colleges and universities must employ faculty competent in online instruction. As the array of online courses continues to rise and as greater numbers of students select this learning format, it is important, if not imperative, that all aspects of online education receive additional empirical investigation to build a valuable knowledge base for continued improvement in instruction and design of online courses.

## **Methods**

Through the study described below, the researcher addressed the perceptions of instructors currently teaching in the online environment in the tri-state area of Pennsylvania, Ohio, and West Virginia. Based on an extensive review of literature and another study previously conducted by this researcher (Ray, 2009), this study materialized.

### *Design of the Study*

The review of literature failed to provide a survey instrument that satisfied the needs of this study. A survey was developed that focused specifically on the perceptions of online faculty. The researcher first obtained Institutional Review Board (IRB) approval for study. Then, the survey was conducted using an online survey tool called Vovici. Although web-based surveys are sometimes criticized for failing to reach all potential participants due to access issues, the target population of this particular study consisted of only online instructors currently teaching in the fall of 2008, so access to the Internet did not represent a concern or limitation of this study. Prior to e-mailing the survey, a panel of experts reviewed the survey for completeness and understanding. Based on the recommendations of the expert panel, minor modifications were made to the survey.

### *Population and Sample*

The population of the study was a random selection of online faculty in the tri-state area of Pennsylvania, Ohio, and West Virginia that were teaching at least one totally online course during the fall of 2008. A total of 21 colleges, universities, and community colleges were identified in the state of Pennsylvania, 5 in Ohio, and 5 in West Virginia for participation in this study. When possible, ten faculty members from each of the institutions were randomly selected from course catalogs and institutional websites. In the

case of institutions that offered less than ten online classes or possessed less than ten online faculty members, all of the identified faculty members received the survey. For one institution, the course catalog was not available, so the school was contacted for a list of online faculty in various departments in the institution. All ten of the identified faculty members from that institution received the survey. In total, the survey was distributed to 300 faculty members teaching an online course in the fall of 2008.

#### *Procedure*

After the random selection of faculty, all potential participants received an e-mail explaining the study and asking for participation. Potential participants were asked to respond within two weeks. The survey participants were intentionally kept anonymous as to name or institutional affiliation. After one week, a reminder e-mail was sent. The day before the close of the survey, one final e-mail was sent reminding potential participants that the survey was set to close on the following day.

Survey questions one through five gathered basic demographic information about the sample. This information included: years teaching in higher education, faculty rank, total number of courses taught totally online, gender, and the type of institution (college or university and public or private).

Additionally, the researcher conducted t-tests where appropriate to examine for significance. For example, a dependent sample t-test was used to determine if a statistically significant difference existed in the perceived technical preparation of instructors before and after training. The training session provided to the faculty member represented the independent variable, whereas the perceived technical preparation of the instructor before and after training represented the dependent variable. The null hypothesis was  $H_{01}: \mu_{\text{beforetechnicaltraining}} = \mu_{\text{aftertechnicaltraining}}$ . The alternative hypothesis was  $H_{a1}: \mu_{\text{beforetechnicaltraining}} \neq \mu_{\text{aftertechnicaltraining}}$ . For this statistical procedure, alpha was set at .05 and a two-tailed t-test was conducted.

Next, the researcher wanted to determine if a significant difference existed in the perceived pedagogical preparation of instructors after receiving training. The same statistical procedure outlined above was used with pedagogy instead of technical preparation. The null hypothesis was  $H_{02}: \mu_{\text{beforepedagogicaltraining}} = \mu_{\text{afterpedagogicaltraining}}$ . The alternative hypothesis was  $H_{a2}: \mu_{\text{beforepedagogicaltraining}} \neq \mu_{\text{afterpedagogicaltraining}}$ . Again, alpha was set at .05, a two-tailed t-test was conducted, and the null hypothesis was rejected if the p value was found to be less than .05.

Additionally, the following types of questions were addressed through the survey. A Likert Scale question was utilized to address the perceived difficulty of converting a course from face-to-face to totally online. Participating faculty were also questioned as to the type of training received prior to instructing online (not trained, Course Management System (CMS) provided, institution provided, both CMS and institution provided, or *Other*). In addition, yes/no questions were provided to determine if faculty believed that technical and/or pedagogical training should be required prior to instructing online and if participants wanted additional training opportunities for themselves related to technology and/or pedagogy. Lastly, faculty were asked to check the preferred format(s) of the additional training (one-on-one, face-to-face small group, face-to-face large group, web-based, *Other*).

#### **Results**

Out of the 300 surveys e-mailed to potential participants, 111 were returned, constituting a 37% response rate. Demographic information was collected, including years teaching in higher education (Table 1), faculty rank (Table 2), type of institution (Table 3), number of courses taught online (Table 4), and gender (Table 5). One person elected not to provide his or her gender. All of the other demographic questions were answered by all participants.

Table 1. *Years of Teaching Experience in Higher Education*

<b>Years</b>	<b>Frequency</b>	<b>Percentage</b>
0-2	1	1%
3-5	19	17%
6-8	16	14%
9-11	15	14%
12 or more	60	54%

Table 2. *Rank of Faculty Participants*

<b>Rank</b>	<b>Frequency</b>	<b>Percentage</b>
Adjunct/ Part-Time	17	15%
Instructor	14	13%
Assistant	24	22%
Associate	26	23%
Full	30	27%

Table 3. *Type of Institution*

<b>Type</b>	<b>Percentage</b>
Public University	62.2%
Private University	20.7%
Community/Two-Year Colleges	7.2%
Public College	5.4%
Private College	4.5%

Table 4. *Number of Courses Taught Fully Online*

Courses	Frequency	Percentage
Less Than 5	51	46%
6-10	25	23%
11-20	13	12%
21 or More	22	20%

Table 5. *Gender of Participants*

Gender	Frequency	Percentage
Female	65	59%
Male	45	41%

**RQ1:** This question addressed the difficulty associated with moving a course into the online format (see Figure 1). Of the participants in this study, over 50% of the respondents classified converting a course from face-to-face to totally online as either “hard” or “very hard.” Subsequently, only 7.2% of respondents classified this task as “easy” or “very easy.” This indicates that the majority of instructors perceive a challenge in moving their courses into the online format. Additionally, only three of the participants had never moved a course from face-to-face to totally online, so this is a challenge that the majority of instructors are experiencing.

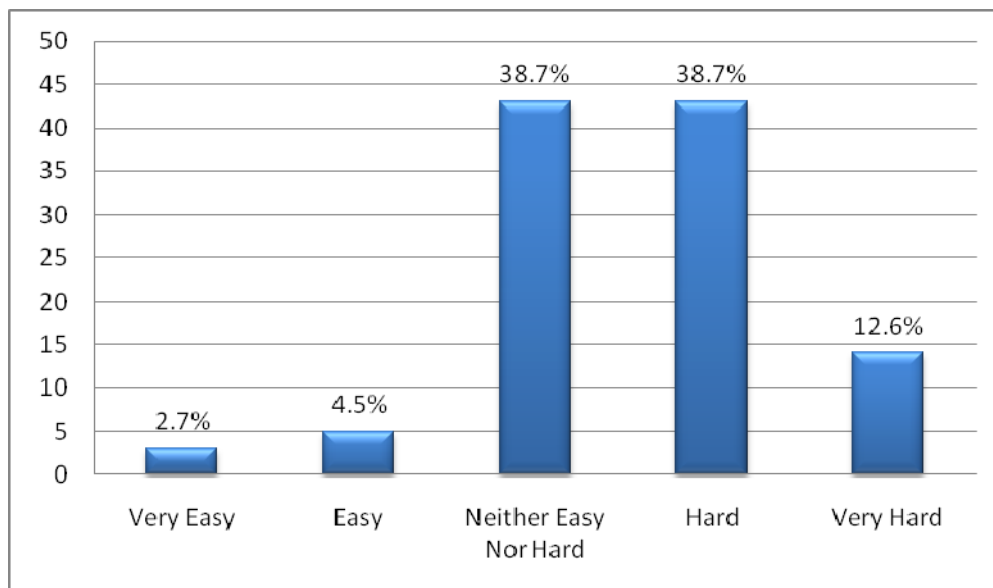


Figure 1. Difficulty of Converting a Course from Face-to-Face to Online

**RQ2:** This question addressed whether or not faculty desired additional training in pedagogy and/or technology, and if so, in what format(s). In the area of technical training 65.8% of respondents wanted additional training opportunities. Similarly, 64.6% desired additional pedagogical training. When looking at the preferred formats for technical training, small group face-to-face (37.8%) and web-based (32.4%) received the majority of responses. Only 4.5% desired large group face-to-face and 16.2% desired one-on-one training formats. The preferred format for pedagogical training was once again led by small group face-to-face (45%) and web-based (29.7%). Again, large group face-to-face was selected the least often (8.1%) followed by one-on-one (16.2%).

**RQ3:** This question addressed where instructors get formal training on how to instruct online. It is important to note that a large percentage of instructors were not formally trained in technology (23.6%) or pedagogy (37.8%) prior to teaching online. Of those that were formally trained in technology, 70.9% received institution provided training and 14.5% received CMS provided training prior to instructing online (Table 6). Of those that received formal pedagogical training, 55.8% received it from the institution and 9.9% received it from the CMS (Table 7).

Table 6. *Formal Technical Training Prior to Instructing Online for the First time*

Format of Training	Frequency	Percentage
Institution Provided	65	59.1%
CMS Provided	3	2.7%
Institution & CMS Provided	13	11.8%
Other	3	2.7%

Table 7. *Formal Pedagogical Training Prior to Instructing Online for the First time*

Format of Training	Frequency	Percentage
Institution Provided	54	48.6%
CMS Provided	3	2.7%
Institution & CMS Provided	8	7.2%
Other	4	3.6%

**RQ4:** This question focuses on whether or not instructors currently teaching online believe that training should be required prior to instructing online. The majority of instructors in this study believed that training should be required prior to instructing online in both technology and pedagogy. In fact, 86.5% of the respondents indicated that faculty new to online instruction should be required to participate in technical training prior to instructing online and 84.5% answered that faculty new to online instruction should be required to participate in pedagogical training prior to instructing online.

**Ho<sub>1</sub>:** For this hypothesis the researcher attempted to address the perceived preparation of online instructors from a technical perspective prior to formal training (Figure 2) and after formal training (Figure 3). In Figure 3, the 28 people that were not formally trained were not included.



To analyze these results, a paired samples t-test was conducted to determine if a significant difference existed between the perceived technical preparation to instruct online before and after formal technical training. A statistically significant difference existed in the perceived technical preparation of instructors prior to formal technical training ( $M=2.02$ ,  $SD=1.253$ ) and after formal technical training ( $M=3.27$ ,  $SD=.697$ ,  $t(84)=-11.245$ ,  $p<.0005$ ). Therefore, the null hypothesis was rejected. Additionally, eta squared, which measures effect size, was calculated by the researcher and the work of Cohen (1988) was utilized to analyze the effect size. Cohen believes that .01 equates to a small effect, .06 equates to a moderate effect, and .14 equates to a large effect. Based on Cohen's (1988) work, the eta squared statistic (.60) indicated a large effect.

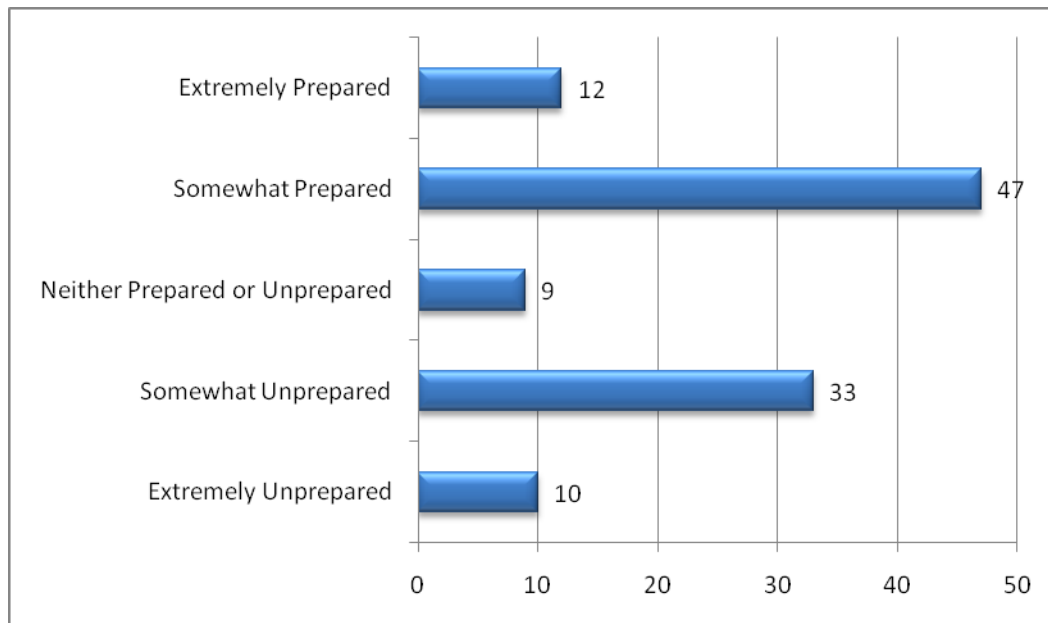


Figure 2. Perceived Technical Preparation Prior to Formal Training

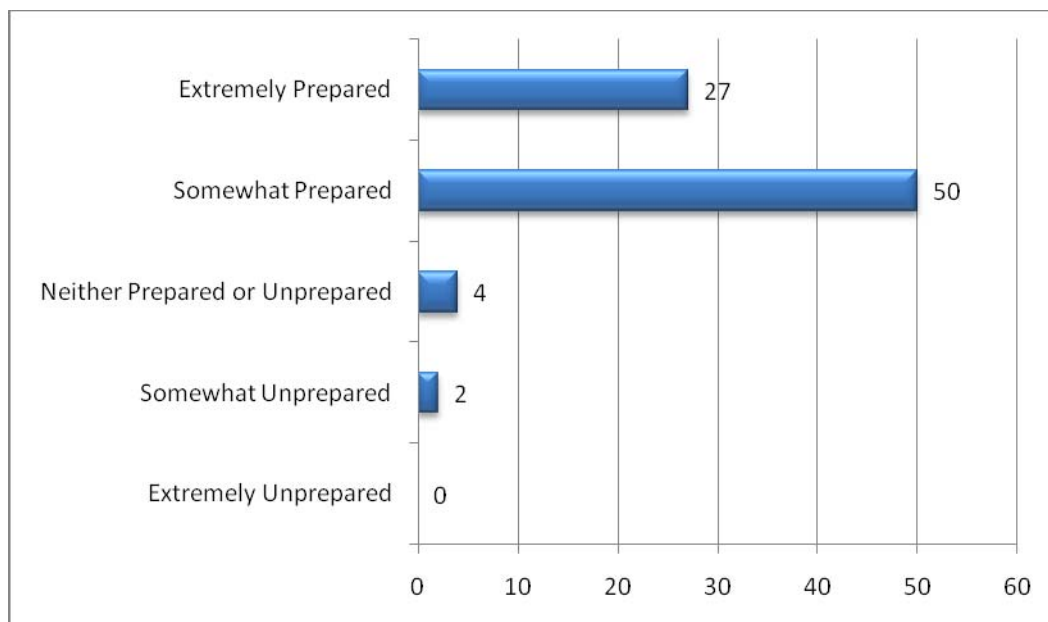


Figure 3. Perceived Technical Preparation After Formal Training

Ho<sub>2</sub>: For this hypothesis the researcher addressed the perceived preparation of online instructors from a pedagogical perspective prior to formal training (Figure 4) and after formal training (Figure 5). Again, using a paired samples t-test, a statistically significant difference existed in the perceived pedagogical preparation of instructors prior to formal pedagogical training ( $M=2.07$ ,  $SD=1.201$ ) and after formal pedagogical training ( $M=3.21$ ,  $SD=.764$ ,  $t(67)=-9.282$ ,  $p<.0005$ ). Therefore, the null hypothesis was rejected. To determine the extent of the effect, eta squared was calculated and again the work of Cohen (1988) was utilized to indicate the magnitude of the effect. Again, the eta squared statistic (.563) indicated a large effect.

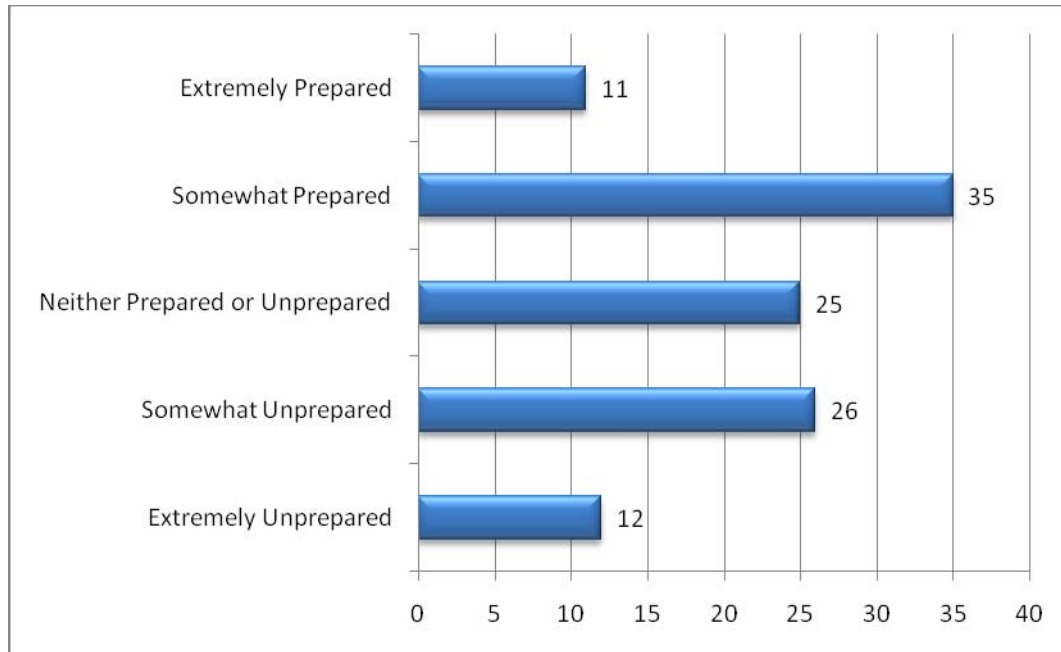


Figure 4. Perceived Pedagogical/Instructional Design Preparation Prior to Formal Training

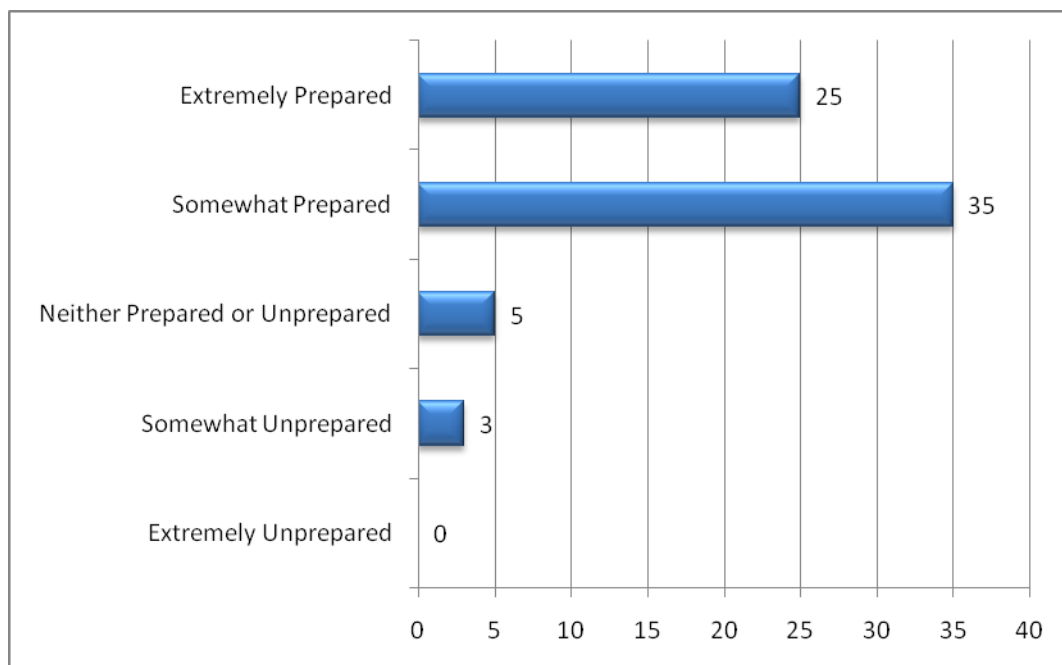


Figure 5. Perceived Pedagogical/Instructional Design Preparation after Formal Training

## Discussion

This study constituted a few major findings. First, it found that moving a course from face-to-face to totally online represents a difficult task for online instructors. Like Sugar, Martindale, & Crawley (2007) this study seems to indicate that the face-to-face classroom is difficult to replicate in the online environment. All but three of the instructors in this study had made the attempt to move at least one course into the online format. A better understanding needs to be developed on how to assist faculty with this transition of moving content from face-to-face to online.

Additionally, it was found that the majority of those teaching in the online environment desire additional opportunities to train in both technology and pedagogy. They prefer to have these courses in the web-based or in the small group face-to-face formats. Like Pankowski (2003), this study found that instructors believe in the importance of training and also desire additional opportunities after they have begun instructing in the online format. Researchers have already touted the importance of not only training prior to instructing online, but also the need for ongoing training (Barker, 2003; Feist, 2003; Smith, 2005). This study shows that not only researchers possess this belief, but also that instructors agree with the need for ongoing professional development.

A third finding in this study is that a large percentage of instructors are not being trained to teach online in either pedagogy or technology (37.8% and 23.6% respectively). This finding is congruent with other studies and shows that institutions still lack policies requiring instructors to train prior to teaching online and some still fail to provide any training opportunities to their professors (Keramidas et al., 2007; Kosak et al., 2005; Ray, 2009). This finding is quite alarming given the next finding of this study which indicates that those currently teaching online ultimately believe that technical and pedagogical training should be required prior to allowing someone to instruct online.

In fact, an overwhelming 86.5% of the respondents thought that faculty new to online instruction should be required to participate in technical training prior to instructing online and 84.5% believed that faculty new to online instruction should be required to participate in pedagogical training prior to instructing online. Although few in number, some studies have concluded that online instructors believe that training should be required prior to instructing online. For example, in a Bates and Watson (2008) study, participants concluded that teaching online required very different skills.

Lastly, and arguably the most important finding in this study is that training faculty in technology and pedagogy prior to instructing online resulted in a significant difference in the perceived preparation of instructors to teach in the online format. Similarly, in a study of pharmacy instructors (LeBlanc, Pruchnicki, Rohdieck, Khurma, & Dasta, 2007) just three hours of training resulted in a significant increase in instructors' perceived ability to instruct online. Although the specific methods of training received are unknown in this study, it can be assumed that the training varied widely among these participants. Regardless of the format, the training received prior to instructing online in both technology and pedagogy had a positive effect on the instructor's perceived preparation to teach online.

## Conclusions

With the relative newness of the online format, there is much to be learned and addressed from a research standpoint. This study adds to one important body of knowledge about online learning, the faculty perspective. Although this study only represented instructors in Pennsylvania, Ohio, and West Virginia, it could be argued that the population of this study was representative to the general population of instructors currently teaching in the online format due to the fact that the instructors were randomly selected from many different institutions and various departments, had various levels of experience in higher education, and also possessed a range of experience in the online format.

This study showed that those teaching in the online format believe in the importance of training instructors prior to teaching online. Because of this finding, it becomes important for institutions of higher learning to address this concern. Instructors teaching in the online format realize the differences associated with instructing online versus teaching in the face-to-face classroom and are struggling to move their course content into the online format. Additionally, instructors not only desire training prior to teaching for the first time in the online format, but they also desire ongoing training opportunities after they have begun to teach online. The recommendation of this researcher is for all institutions to review their current training offerings for online instructors. If no program exists to train instructors prior to

instructing online in both technology and pedagogy, one should be formed. Additionally, institutions should find a way of addressing the training needs of those already instructing in the online format. Lastly, additional research needs to be conducted to find the appropriate prescription for adequately preparing instructors to teach online.

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