

Adjunct Professors' Perception of Their Teaching Effectiveness

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This study examines the extent to which adjunct professors (a) perceived that they have applied six effective teaching principles (Ramsden, 2003), and (b) perceived that they have been educationally prepared to implement such principles. A purposeful sampling of adjunct professors was conducted. Relationships between whether or not the respondents had a professional teaching degree (bachelor's, master's, or doctoral degree in education) and dependent variables (a) and (b) were addressed. Adjunct professors holding professional teaching degrees perceived that they implemented effective teaching principles to a statistically significantly greater extent than did their non-professional teaching degreed counterparts. Adjunct professors holding professional teaching degrees also perceived that they were better educationally prepared to implement effective teaching principles than were their peers without such degrees.

This study found that adjunct professors' perceived ability to implement effective principles of teaching varies widely between groups and is most closely associated with their holding a professional teaching degree. The old sink or swim method of identifying those successful professionals from business or sciences to be used as knowledgeable professors in higher education can leave a lot to be desired in the classroom. Identified in this study were findings that indicated being knowledgeable, or even highly proficient, in your field does not reflect an understanding of what effective teaching practices are or how to use them in the classroom. Certainly, it would seem a large number of men and women who have obtained a wealth of knowledge in specialized professions throughout their working careers, and then make themselves available for institutions of higher learning to employ, can adapt to the needs of the classroom and become excellent instructors and professors. This study found that, for many without a professional teaching degree (PTD), this is not the case.

This study examines the extent to which adjunct professors (a) perceived that they have applied six specific effective teaching principles as identified by Dr. Paul Ramsden (2003) and (b) perceived that they have been educationally prepared to implement educational principles in the classrooms. A purposeful sampling of adjunct professors was conducted by the author in 2016 to determine relationships between whether or not the respondents had a professional teaching degree (bachelor's, master's, or doctoral degree in education) and dependent variables regarding whether the queried adjuncts in this study know or understand effective teaching principles to assist in their teaching. It also examined how prepared they perceived their education, in whatever field, prepared them to become educators, specifically in their fields of expertise.

In particular, the study compared the differences in use of Ramsden's (2003) effective teaching practices (ETP) by those adjunct professors with professional

teaching degrees (PTDs) and those adjunct professors who do not have such degrees. The study findings reported that adjunct professors holding professional teaching degrees perceived that they implemented effective teaching principles to a statistically significantly greater extent than did their non-professional teaching degreed counterparts. Adjunct professors holding professional teaching degrees also perceived that they were better educationally prepared to implement effective teaching principles than were their peers without such degrees. There were six independent variables included in the analysis of relationships: a) the adjunct professor's years of experience as an adjunct professor; b) grade level taught at the college or university, graduate or undergraduate; c) participants' gender; d) participants' age; (e) participation in professional development training; and f) whether the adjunct professor has attained a professional teaching degree or not. This last variable is the one of primary interest. In order to achieve the aim of this paper, a detailed background on ETP will be presented first. Next, the methodology will be presented and quantitative analyses conducted. Finally, the results and their implications will be discussed.

Adjunct faculty employment by institutions of higher education (IHE) has become the most pervasive change in higher education today. Few institutions advise students when using adjunct professors, which can have less than expected result depending on the adjunct's use of ETP. Although having full-time professors does not ensure ETP will be used, the full-time professor will usually have presented many more classes than a part time professor and will present a more dependable level of instruction than many part-time instructors with or without a PTD.

IHE, through necessity, will continue to use a high number of part time instructors. Currently over 68% of professors teaching college or university students are adjunct faculty instead of full-time faculty. That is not who most students, or parents, assume populate the

Table 1
Six Effective Teaching Principles and Their Properties

1.	Principle 1: Concern and respect for students and student learning and its properties: <ol style="list-style-type: none"> a. Don't over control activities – Be normal. b. Instill confidence in student learning by allowing curriculum to flow.
2.	Principle 2: Appropriate assessment and feedback and its properties <ol style="list-style-type: none"> a. Prepare a quality class syllabus and explain it to the class. b. Use firm fairness as an instructional technique c. Look for and applaud course internalization
3.	Principle 3: Independence, control and engagement and its properties: <ol style="list-style-type: none"> a. Appreciate students' levels of understanding. b. Allow students to learn at their own pace. c. Accommodate students' differences in learning abilities.
4.	Principle 4: Concern and respect for students and student learn and its properties: <ol style="list-style-type: none"> a. Don't over control activities, be normal. b. Instill confidence in student learning. c. Allow curriculum to flow.
5.	Principle 5: Appropriate assessment and feedback and its properties: <ol style="list-style-type: none"> a. Prepare a quality class syllabus and explain it to the class. b. Use firm fairness as an instructional technique. c. Look for and applaud course internalization.
6.	Clear goals and intellectual challenge and its properties <ol style="list-style-type: none"> a. Establish learner-centered instruction. b. Set clear goals with clear intellectual standards. c. Prepare students to attain high standards

United States IHE faculty populations. Because fiscal realities require IHE to cut teaching costs to minimum levels, adjunct professors are likely to be standing at the front of a classroom rather than full time professors. Does this mean the students are being short changed in their education or that degrees are being issued to students ill-prepared to enter the work force and succeed? The answer to that is heavily aligned with the skill and professionalism of the individual adjunct, his or her understanding of professional educational practices, and his or her appreciation of the effective teaching practices required to make learners out of students.

Effective Teaching Principles (ETP) - Ramsden (2003)

The effective teaching principles that are used to inform this study were designed by Ramsden (2003) to be helpful in training professors, including adjunct professors, who lack PTDs as instructors in higher education. The effective teaching principles are: 1) interest and explanation; 2) concern and respect for students and student learning; 3) appropriate assessment and feedback; 4) clear goals and intelligent challenge, 5) independence, control and engagement; and 6) learning from students (See Table 1). These principles are further

broken down into properties of good teaching that then begin to allow discussion on how they are inter-related to each other and to the holistic constructivist theories and properties of transformational learning, andragogy, self-learning, and critical thinking.

The absence of formal teacher training, or not having received a professional teaching degree, does not remove the responsibility from adjunct professors to understand their curriculum or their students' individual learning needs when presenting course instruction (Brookfield, 2013; Illeris, 2014; Knowles, 1988; Ramsden, 2003, 2011; Weimer, 2013). Pratt and Associates (2002) observe that higher education instructors have a responsibility to learn teaching techniques and principles that meet the needs of their students.

Taylor and Cranston (2012) and Illeris (2014) write that while it is not within a researcher's power to give higher education instructors step-by-step guidance on how to teach, there are "core elements" (p. 8) to teaching that should be integrated into ETP. Taylor and Cranston's (2012) recommended that core elements are the following: individual experiences of the instructor that frame an instructor's approach to teaching; critical reflection into the course content and the process that it was presented to each class; a holistic orientation to the

emotional and social dimensions of student needs to reduce argumentation and increase critical reflection and cognition; awareness of the context of course material in relation to students' perception of their need for the material and any personal or sociocultural conditions involved; and finally, a creation of an authentic relationship between students and the instructor.

Ramsden's writings agree with core elements delineated by Taylor and Cranston (2012). These elements have assisted Ramsden in developing the six effective teaching principles for higher education adjunct professors that inform this study. Ramsden suggests the six effective teaching principles are meant to be starting points from which each instructor can "understand and articulate clearly what is and what is not useful" (p. 87), and he suggests that higher education instructors be given teaching tools to start their understanding of teaching styles and learner needs that were not presented to them in their own college programs. What is the goal? Together with the instructor's course content experience, these six principles can build instructors' knowledge and confidence to become better learner-centered instructors.

New or seasoned adjunct professors can individually learn from Ramsden's ETP, or the principles can become the subject of professional development programs for new and seasoned adjunct professors. With modern technology being used so abundantly in education, ETP of many styles avail themselves to become a pre-teaching learning program for adjunct professors (Santos, 2012). Indeed, the results of adjunct professor pre-instruction training, using principles comparable to Ramsden's, have been found to be significant for instructor and non-traditional learner efficacy during classroom instruction (Musaitif, 2013; Santos, 2012). Student achievement was seen to have improved when results from adjunct professors with pre-instruction training were compared to instructor control groups not given instructor pre-instruction training (Borjarczyk, 2008; Santos, 2012).

Background

The desire to understand and improve adult education has increased since Lindeman (as cited in Knowles, 1980) first identified differences in how children and adults learn. The six principles as identified by Ramsden underscore the comprehensive and humanistic nature of learning. In higher education these principles have prompted research into brain activity, cognition, and student and teacher motivation (Glickman, Gordon, & Ross-Gordon, 2010) that contribute to the understanding of the special requirements that exist for adult learner needs. The area that has received only a modicum of attention and research is that of effective teaching principles to be used in adult higher education classrooms (Weimer, 2013).

Although many adjunct professors are content knowledge experts in their fields, they often lack training in, or have no familiarity with, effective teaching principles (Kezar & Maxey, 2012). Adjunct professors who perceive that they are not familiar with ETP may lack the skills to overcome student or institutional obstacles that impede their ability to understand student learning needs in their classrooms (Ramsden, 2003). Harris and Cullen (2010) conclude that even though important research has been conducted into these issues with full-time college and university professors, little research has been done with adjunct professors.

This area of research brings about an increased level of importance when applied to the adjunct professor population that is increasing in universities and colleges throughout Pennsylvania. The increased personnel budgeting constraints do not always allow faculty to be positioned as, and where, a university or college may desire (Santos, 2012). The result is the increased use of adjunct professors in undergraduate and adult classes (Kezar & Maxey, 2012). Adjunct professors' content experience and expertise (Concordia, 2014) are utilized on a class-by-class basis where teaching does not require a full-time instructor with full pay and benefits but does require a content knowledge instructor. The question becomes the issue of the adjunct professor knowing, or understanding, theories and principles with which to teach university and college students (Brookfield, 2013).

Little research has been done into the perceived use of ETP by adjunct professors with or without professional teaching degrees in university and college classrooms (Weimer, 2013). Consequently, this study offers a significant contribution to the literature, because it identifies whether a purposefully selected population of Pennsylvania adjunct professors, with and without professional teaching degrees, perceive that they (a) apply effective teaching principles and (b) have been prepared to apply these principles.

Mitigating Factors

The employment of adjunct professors is on the rise in Pennsylvania IHE (Linda Hayden, personal communication, September 20, 2013). In response to the increased cost of education and institutional budgetary constraints, Pennsylvania IHE will continue the hiring of part-time adjunct professors to fill classroom teaching needs. Higher education does not require teaching certification from these adjunct professors (Santos, 2012), thus leaving the quality of instruction up to each instructor (Musaitif, 2013). Ramsden (2003), Bain (2004), Weimer (2013), Brookfield (2013), and Illeris (2014) have reservations about the quality of the instruction in classrooms where ETP are not being used. Ramsden has indicated that

the use of the six ETP developed for higher education adjunct professors can be presented in professional development training to make adjunct professors more proficient and professional.

The use of the effective teaching principles is only as good as the adjunct professors' or institutions' application of those principles (Ramsden, 2003; Weimer, 2013). No single principle will fulfill all of the needs for all adjunct professors; however, through adjunct professors' use of researchers' findings about principles for teaching, world-community higher education requirements can be met (Ramsden, 2011). Instructor motivation to learn new ETP, feelings of inclusion into the faculties where they teach, office space for their use, a lack of teaching theory and learner needs, and a lack of proficiency in the use of college and university technology are all factors that impact adjunct professors' application of ETP (Komos, 2011; Merriam & Brockett, 2007). Factors such as these can be overcome with effectively planned and presented professional development training.

A more difficult factor to overcome is resistance from members of the faculty who battle or attack new procedures and principles (Bain, 2012). Adjunct professors with previously constructed course syllabi or lesson plans can tend to resist new principles that they perceive as ineffective as or at least no more effective than what they are already using (Bain, 2004). Until they can be convinced evidence-based teaching principles and strategies can be effective in their style of teaching, change is unlikely to occur (Brookfield, 2013).

Adjunct Faculty Perceptions of Their Personal Training in Pedagogy

Several studies whose methodologies are perception-based, as is this study, have produced correlations between workers', teachers', administrators', and students' perceptions of their performance and their actual performance as self-evaluated, peer-evaluated, or supervisor-evaluated (Kezar & Maxey, 2012). As this study requested self-reported perceptions from adjunct professors, this information is relevant. Mabe and West (1982) found that self-evaluations of workers' performance were positively correlated with actual workplace performance as assessed by their peers. This correlation is highest when the self-evaluators are intelligent and invested in the organization where they work as the participants in this study are invested with their teaching and the perceived use of ETP (Mabe & West, 1982). John and Robins (1994) found that self-perceptions in the workplace demonstrate convergent validity when compared with actual work performed as assessed by staff developed criteria. The self-evaluations were only slightly more positive than peer evaluations (John & Robins, 1994).

Many adjunct professors without PTDs perceive that their teaching skills are less than complete because "Most university faculty members hardly received any training in teaching skills because their universities in the past did not pay special attention to assisting them to teach better" (Chang, Lin, & Song, 2011). Moore (as cited in Lyons, 1999) related that adjunct professors perceive their acceptance as faculty is lacking in most IHE while Gappa and Leslie (1993) argued that their academic backgrounds in their specific fields prepared them for the content knowledge in the subject IHE hired them to teach, but not specifically for instruction using ETP. Santos (2012) found that the adjunct professors she hired for her university Teacher Professional Development courses were well versed in technology, budgeting, leadership, and other subjects that they were hired to teach, but not well versed in the ETP she had expected they would know. She found that many non-PTD holding adjunct professors' perceptions of their teaching abilities did not match their classroom performances (Santos, 2012).

Cox, McIntosh, Reason, and Terenzini (2011) found that in the schools and faculty they studied "there appears no clear pattern indicating a relationship between institutional policy and faculty perceptions" (p. 819) of what good teaching practices contain. IHE policies about "[Cultures of teaching] were more prevalent at institutions with [learner-centered] policies" (Cox et al., 2011, p. 819), but faculty actual practices of "old and comfortable" (p. 820) classroom procedures over-rode policies in many cases. To wit, where IHE report they prefer and advocate learner-centered teaching practices, Fletcher, Djajalaksana, and Eison (2012) found that part-time faculty continue to use "lecture (48%), whole-group discussion (17%) and group questioning (23%) as their three most frequently employed methods of instruction" (p.78). While these teaching strategies can be effective forms of instruction and learning, Fletcher et al. (2012) asserted that, regardless of IHE policies adjunct professors feel [perceive] they know their preferred teaching styles and "seem to rely more on traditional approaches in teaching their classes" (p. 79).

Mullens (2001) found that adjunct professors display differing levels of instructional competence and their perceptions of their own abilities. When instructing within their content knowledge areas, instructor efficacy and quality in subject matter use is high. At the same time adjunct professors' pedagogical skills are very high in some classes and less than marginal in others (Mullens, 2011). Chang et al. (2011) noted that "students are most satisfied with what teachers [adjunct professors] teach, while least satisfied with how they teach" (p.53). Santos (2012) pointed out that this disparity, between the teaching ability stated by adjunct professors and the student satisfaction with subject

matter taught in their classes and how the instruction was delivered, is what prompted her to develop a pedagogy professional development program for adjunct professors that were hired to instruct in her IHE.

Relationships Between Adjunct Faculty Perceptions and Adjunct Faculty Performance

Assessing adjunct professor performance is difficult because most IHE only use student reported evaluations for part-time instructors (Gappa & Leslie, 1993; Kezar & Maxey, 2012). Kezar and Sam (2010) found that many IHE have no developed evaluation system for adjunct professors. Cox et. al. (2014) explained that IHE are encouraging a shift from teacher-centered to learner-centered pedagogies, although some full-time faculties are resistant to that shift. Kezar and Sam (2010) found that “many non-tenure-track [part-time] faculty consider themselves as professionals with in-depth training and are socialized to academia” (p. 65) and resist pedagogical changes even when IHE change policies. Cox et al., (2011) indicated that if IHE desire a change from pedagogies such as lecture, they are compelled to reeducate their faculties to a new culture of pedagogy incorporating learner-centered activities and abandoning a reliance on teacher-centered strategies.

Santos (2012) reported that a number of the non-PTD trained adjunct professors she had hired reported that they were confident that they could adequately teach subjects in their content knowledge areas; however, they did not know about ETP. She found that their perceptions were misguided. Until she initiated a pedagogy relevant professional development training program, student achievement resulted in both student and administrative frustration and higher than anticipated student drop-out rates from her program (Santos, 2012). Studies of adjunct professors have indicated that they believe that they provide quality education to students and a quality service to the IHE where they teach (Kezar & Sam, 2010).

Brookfield (2013) observed that higher education teachers who do not use or understand ETP “turn learning spaces into dead zones of mind-numbing busy-work, in that people’s creativity is exercised for the sole purpose of finding new ways to manage the boredom” (p. 5). Bishoff (2010) wrote that when students are taught, not as individuals, but in a “one-size-fits-all” (p. 7) manner, instructors are mostly ineffective and often lose their ability to instruct effectively. Ramsden (2003, 2011), developer of six effective teaching principles that inform this study, concurred with Bishoff (2010) in his first principle, interest and concern for students, by stating that instructors need to begin the process of learning methods to entice students to accept the responsibility for becoming learners.

ETP are now available and have become a pivotal portion of improving classroom results (Bain, 2012). However, delivering effective instruction to fulfill student’s learning needs does not always come naturally to instructors (Brookfield, 2013). Teaching principles emphasize adapting to learning principles to help students internalize and learn course material (Weimer, 2013). Professors are more effective when they understand that effective learning occurs when the student is made responsible for assimilating the information presented by the professor (Bain, 2012) and “delivering that instruction takes experience and training” (p. 15).

Professors trained in ETP are able to decide what principles are the most appropriate for their fields of study and the most effective for their student populations learning success (Ramsden, 2011). Teachers should “expect students to change their interpretation of the world where they live through developing their understanding of the subjects they have studied” (Ramsden, 2003, p. 39). The responsibility for fulfilling that expectation places instructors in a position where they need to know student learning styles and adapt ETP into their classes to meet those needs (Ramsden, 2003).

Classroom focus has shifted toward learner achievement and away from instructor superiority (Weimer, 2013). Ramsden (2003) noted that the problem for many instructors is that their undergraduate students are unable to understand how and when they are meeting class directions and requirements in order to learn the course material. Part-time instructors may be unsure what ETP are or when to use them to remedy that problem (Kezar & Maxey, 2012).

Method

The primary aim of this study was to examine the relationships between adjunct faculty members’ perceptions of (a) their implementation of ETP and (b) their educational preparedness to implement ETP and whether or not they possess a PTD.

On-line electronic sampling was conducted using a researcher-designed electronic survey instrument, and SurveyMonkey software facilitated the survey’s distribution. All collected data were self-reported.

Pilot testing of the researcher-designed survey was conducted with randomly selected volunteer Neumann University adjunct professors. Following pilot testing the internal validity of the survey instrument was assessed using both Cronbach’s alpha and respondent feedback. The Cronbach’s alpha was calculated to be 0.94, indicating a very high level of internal validity of the survey.

The main body of the survey instrument utilized a Likert-scale survey instrument, in compliance with Vogt et al. (2012) Likert-scale survey development recommendations, with ETP questions familiar to the

Table 2
*Adjunct Professor Participant (APP) Means, t-values for Differences
 between Means, and p-values for Independent Variables A-H.*

	Mean (proportion for categorical variables)	t-Value	p-Value
1. App by Professional Teaching Degree (PTD):			
APP with PTD	.50		
APP w/o PTD	.50		
a. Implementation of ETP by PTD:		2.45	0.0175
APP with PTD	4.22		
APP w/o PTD	3.97		
b. Educational Prep. to implement ETP:		3.03	0.0036
APP with PTD	3.74		
APP w/o PTD	3.38		
2. APP by Grade Levels Taught:			
Undergrad with PTD	.51		
Undergrad w/o PTD	.49		
Graduate with PTD	.52		
Graduate w/o PTD	.48		
3. APP by Gender:			
Male	.50		
Femail	.50		
4. APP by Age:			
25-35	.08		
36-45	.12		
46-54	.30		
55+	.50		
5. App by Years of IHE Teaching Experience:			
1-5 Years	.27		
6-10 Years	.28		
11-15 Years	.15		
16+	.30		
6. APP with Professional Development ETP Training:			
Yes	.38		
No	.33		
Unsure	.28		

participants. Each survey instrument question dealing with perceived implementation of ETP contained a five-choice Likert-scale option where choice one was “Hardly Ever”, choice two equaled “Occasionally”, choice three was “Sometimes”, choice four equaled “Frequently”, and choice five equaled “Almost always” (Johns, 2010; Vogt et al., 2012).

The survey instrument asked each respondent to estimate the extent to which they perceived that they engage in the use of ETP when preparing to teach higher education students. Similarly, the respondents were asked to estimate the extent to which they perceive that their educational

backgrounds prepared them to engage in such teaching behaviors. This was done using forty questions, each of which consisted of two parts (one part addressing implementation of ETP, the other addressing educational preparation to implement ETP). Each question was carefully mapped to address one of Ramsden’s (2003) six principles. Respondents were also asked several demographic questions. Additionally, nine distractor questions (that were not relevant to the study) were included in the survey instrument to disrupt the development of predetermined participant response sets to the survey questions (McNeil, Newman, & Steinhauer, 2005; Villafane-Garcia, 2015).

All survey participants were randomly selected by AdjunctNation.com prior to sending participation recruitment emails to two thousand adjunct professors who had identified themselves to Adjunct Nation, Inc., as working or residing in the five counties surrounding, and including, Philadelphia County in Southeastern Pennsylvania. The adjunct professor participants were supplied with a link to the study survey instrument on SurveyMonkey.com when they received their email.

The following hypotheses stem from the work of Ramsden (2003) and were addressed using the previously discussed survey:

Hypothesis 1:

H₀: Adjunct faculty who hold a PTD will perceive that they implement PTD to the same extent as those adjuncts without a PTD.

H₁: Adjunct faculty who hold a PTD will perceive that they implement PTD to a greater extent those adjuncts without a PTD.

Hypothesis 2:

H₀: Adjunct faculty who hold a PTD will perceive that their educational preparedness to implement ETP is the same as those adjuncts without a PTD.

H₁: Adjunct faculty who hold a PTD will perceive that they are more educationally prepared to implement than those adjuncts without a PTD.

Several steps were taken in order to address the aforementioned hypotheses. First, descriptive statistics were calculated for the relevant variables. Next, two t-tests were performed, one for each hypothesis, in order to assess the similarity of the two groups (those with a PTD and those without a PTD). Finally, two multiple linear regressions were performed (one for each hypothesis). In the first case, the dependent variable used was perceived level of implementation of ETP. In the second case, the dependent variable used was perceived educational preparedness to implement ETP. In each regression, the (binary) independent variable of interest was whether or not the respondent held a PTD. Additionally, the demographic variables discussed in the introduction were included in order to (a) control for any potential effects they might have, and (b) examine their relationships with the dependent variables. These analyses will now be presented in detail.

Data Analysis and Results

First, descriptive statistics were calculated for the variables of interest. In particular, the mean levels of (a) perceived implementation of ETP and (b) perceived educational preparedness to implement ETP were calculated. These means were calculated for each group of respondents: those with a PTD, those without a PTD,

males, females, etc... This information is presented in Table 2. Recall that both the implementation of, and preparedness to implement, ETP were measured on a 5-point Likert-type scale. The most noteworthy aspect of these data is that both the sample mean perceived implementation and the sample mean perceived educational preparedness of the respondents with a PTD are quite a bit higher than the corresponding sample means in the group without a PTD.

In order to assess the significance, if any, of the differences above, two t-tests were conducted (t-tests for independent samples with equal variances were determined to be appropriate). The mean difference in perceived implementation (between those with a PTD and those without a PTD) was found to be 0.25. The p-value of the corresponding t-test was found to be 0.0175. Thus, the null hypothesis of no difference between the groups was rejected (at the 0.05 level). Similarly, the mean difference in perceived educational preparedness was found to be 0.36, with a corresponding p-value of 0.0036. Again, the null hypothesis of no difference between the groups was rejected.

The statistically significant differences discussed above were further investigated, in order to assess their effect sizes and, hence, practical significances. The mean difference in perceived implementation was found to be 6.3%. This implies that those respondents with a PTD perceive their level of implementation of ETP to be 6.3% higher than do their peers without a PTD. Similarly, the mean difference in perceived educational preparedness was found to be 10.7%, meaning that those respondents with a PTD perceive their level of educational preparedness to be 10.7% higher than do their colleagues without a PTD.

The final step of the analysis was to conduct two multiple linear regressions as discussed in the methodology. The results of these regressions are presented in Tables 3 and 4. It must be noted that each regression was thoroughly examined in order to assure that the underlying statistical assumptions of regression were met. The most noteworthy findings were that the only variable that appeared to be significantly related to either perceived implementation of ETP or perceived educational preparedness was the possession of a PTD. None of the other variables (gender, age, level of courses taught, participation in professional development, years of experience) exhibited a significant relationship with either perceived implementation or perceived preparedness.

The coefficient of PTD in the first regression implies that, when all other variables are held constant, those with a PTD perceive their level of implementation of ETP to be 0.238 higher than those without a PTD. Similarly, in the second regression, it was found that, holding all other variables constant, those with a PTD perceive their level of educational preparedness to be

Table 3
Regression Results. Dependent Variable: Implementation of ETP

Variable	Coefficient	t-value	p-value
Constant	3.967	22.99	0.000
PTD	0.238	2.212	0.031*
Level Taught	-0.009	-0.069	0.950
Prof Develop	0.125	0.959	0.342
Gender	-0.044	-0.389	0.699
Age	-0.113	-1.037	0.305
Years of Teaching in IHE	0.035	0.0305	0.762

Note: * Indicates statistically significant at 0.05 level.

Table 4
Regression Results. Dependent Variable: Educational Preparation

Variable	Coefficient	t-value	p-value
Constant	3.034	7.819	0.000
PTD	0.745	3.077	0.003*
Level Taught	0.091	1.275	0.784
Prof Develop	-0.170	-0.579	0.565
Gender	0.423	1.730	0.090
Age	-0.287	-1.137	0.261
Years of Teaching in IHE	0.044	0.169	0.867

Note: * Indicates statistically significant at 0.05 level.

0.745 higher than their peers without a PTD. These results will be further discussed and put in context in the following section.

Limitations

Several limitations to this study exist. First, the data were collected solely from the five-county region surrounding Philadelphia, Pennsylvania. A survey from a broader geographical region might provide richer data. Second, the data deal with perceptions of implementation of ETP and not frequency of use of ETP. While it would be very difficult to collect said data, it would be most interesting if data on the frequency of implementation (perhaps in times per hour) were available. Finally, it should be noted that not all faculty who received the questionnaire filled it out. While there is no reason to believe so, if a difference exists between faculty who chose to fill out the questionnaire and those who chose not to, then the results of the study might not be as representative of the population as hoped.

Discussion and Conclusions

Recall that the aim of this study was to examine the factors related to adjunct professors' perceptions regarding their implementation of effective teaching principles (ETP) and their educational preparedness to

do so. Foremost among those factors was whether or not the adjuncts held a professional teaching degree (PTD). As was shown in the preceding analysis, it was found that adjunct professors who held a PTD perceived that they implemented ETP to a greater extent and were more educationally prepared to do so. None of the other variables, not even participation in faculty development training, appeared to be related to perceived implementation of ETP or perceived educational preparation to do so.

These findings imply that there is, indeed, value in adjunct professors earning degrees in education, as those adjuncts who held such a degree perceived their implementation of ETP to be higher than their peers. According to scholars (Ramsden 2003; Weimer 2013), the implementation of such principles is of great value to adult learners. Indeed, Bain (2012) asserts that the usage of such principles is directly related to student achievement.

An even larger difference existed between those with a PTD and those without a PTD regarding their perceived educational preparedness to implement ETP. This should not be surprising since those with a PTD presumably received dedicated training in such principles. This perceived preparedness should allow adjuncts with a PTD to feel more confident in their ability to disseminate information to students in an effective manner.

Just as interesting as the preceding results is the fact that none of the other variables examined were

found to be related to perceived implementation of ETP or perceived educational preparedness to do so. For some of the variables – gender, for instance – this lack of relationship is probably not surprising. For other variables, most notably years of experience and participation in professional development training, this lack of relationship may appear counterintuitive.

Combining the preceding findings with the work of Santos (2012), it appears that two suggestions may be made to increase the usage of ETP. First, individuals with an intention to teach at an IHE should be encouraged to pursue a degree in education at the earliest stage possible, or, if that is not possible, to take formal classes in pedagogy along with their content area coursework.

In the case of adjunct professors, in particular, the preceding suggestion may not be realistic in many situations. This is because many of them serve as practitioners in their area of expertise for years, prior to beginning a career in academia. In these situations, the findings contained herein suggest that these adjunct professors participate in “specialized” faculty development. Note the emphasis on the word “specialized.” As was found, typical faculty development training does not appear to be associated with increased perceptions of implementation of EPT. The type of training suggested by the preceding findings would be as similar as possible to the classroom training of educators. Such a suggestion should not be difficult for most IHE to implement. Indeed, faculty development training sessions led by education faculty that mimic in-class content may prove to provide adjunct professors with some of the same skills that they would have acquired by pursuing a formal degree in education. Such training would, most likely, have to be ongoing, as the educational training received while earning a degree in education is, clearly, broader and deeper in scope than that which could be presented during a day or two of faculty development training.

The findings contained in this paper lead to several areas for future research. First, a similar study, utilizing respondents from a broader geographical area, perhaps international, would be of great interest. This could potentially allow the results contained herein to be extended to a larger population. Second, it would be worthwhile to perform achievement testing on students who were taught by adjunct professors with a PTD and also without a PTD. This would allow the results of this paper to be tied more closely to the work done by Bain (2012). Finally, it would be most interesting to compare the implementation of ETP by faculty holding a PTD with faculty who received the type of faculty development training suggested in the preceding paragraph. This would allow for a direct test of the hypothesis that such faculty development training is valuable.

In summary, it has been found that there is significant value in adjunct professors holding a PTD. Such faculty members perceive that they both implement ETP more frequently and are more educationally prepared to do so than their peers who do not hold such degrees.

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