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The Impact of Faculty Development on Teacher Self-Efficacy, Skills and Perspectives

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Introduction

Continued employment and advancement for faculty members depends upon growth in teaching practices; thus, there is a need for faculty across all disciplines to understand best instructional practices and the strategies that develop effective teaching behaviors and skills. While faculty members at the university level are considered experts in their field of study, many may not have been trained in practices of effective teaching, how to share their expertise, or how to improve their teaching. The induction and mentoring of faculty members is often overlooked in higher education, but many faculty members report they struggle with the teaching aspects of their responsibilities (Sorcinelli, 2000). Creation and evaluation of a faculty development program can aid in the formation of best instructional practices and increase the competency of faculty in meeting the challenges of educating students. Brookes (2010) suggests that a blend of online and face-to-face meetings could be used to provide programs to support faculty. Helping faculty to understand who they are as teachers and instilling a belief that they can be successful teachers are integral aspects of faculty development. By designing and evaluating a new faculty development program, we hope to gain a better understanding of the impact of development programs on faculty competencies and student outcomes.

Addressing the influence self-efficacy on teaching effectiveness and teaching perspectives is essential to the development of faculty development programs. Although there is limited research concerning the influence of self-efficacy on teaching effectiveness, current evidence suggests that a strong sense of self-efficacy in college faculty is an essential component for instructional competence. More research is needed, however, to determine the relationship of self-efficacy on faculty teaching effectiveness and the influence that a faculty development program may have on the acquisition of self-efficacy, teaching competencies, and teaching perspectives.

Theoretical Foundation

Bandura's (1997) theory of self-efficacy provided the framework for the development of this faculty development program and this study. Self-efficacy is the belief you can be successful in your efforts. Self-efficacy is believed to influence teacher performance, choice of tasks, and the amount of effort put into performing those tasks. Teacher self-efficacy would then be the belief you can be a successful teacher. As illustrated in Figure 1, the four sources of self-efficacy identified by Bandura are: (a) experience, (b) social modeling, (c) social persuasion, and (d) emotional and physical reaction. The first and strongest source of self-efficacy is the experience of mastery. Bandura suggests that in order to develop resilient self-efficacy beliefs, one must be experienced in overcoming obstacles by investing sufficient effort, despite adversity. This experience results in individuals becoming stronger with perseverance. To experience mastery, it is vital to complete tasks that are demanding but not overstraining to a person's abilities. Thus, educators can strive for a good fit between task complexity and their abilities. Faculty development programs can help provide teachers the opportunities to learn and develop skills through the sources of self-efficacy. As teachers become more proficient their self-efficacy can increase.

Figure 1. Sources of Self-Efficacy

The second source of self-efficacy is social modeling. A person who observes someone successfully achieving something the person aspires to achieve can lead to an increase of self-efficacy by vicariously learning through others' achievements. But self-efficacy is only influenced when the person striving to improve considers her- or himself similar to the model with respect to skills and capabilities necessary for this achievement.

A third source of self-efficacy is social persuasion. Social persuasion occurs when individuals are convinced by others that they have the capability to master the given activity. Bandura (1997) suggests that it is much more difficult to instill high beliefs than it is to undermine

them. If faculty development programs are to be successful at cultivating teacher self-efficacy, they need not only to be able to give positive appraisals, but also to structure activities in ways that encourage success. Social persuasion, when used by others, can bolster educators' beliefs that they have the ability to master course content and to be successful in the course. Bandura emphasizes, however, that such encouraging comments by significant persons must be convincing and well-grounded to unfold any effect on self-efficacy.

The fourth and final source of self-efficacy is perception of emotional and physical reactions (Bandura, 1997). It is not the intensity of the emotional and physical reactions but rather how they are perceived and interpreted that influences the development of self-efficacy. A dry throat and racing heart, for example, can typically be perceived as anxiety or stress when one lacks ability or skill in a given situation, thus self-efficacy decreases, and success becomes less probable.

Review of the Literature

The development of faculty has been studied in higher education and it is recognized that there is a lack of teaching knowledge and skills in most academic departments. The majority of graduates who receive their training at doctorial-granting universities usually develop an understanding of their research role as an academician but often do not receive adequate teaching or preparation for their teaching role as a faculty member (Gardner, 2005). This lack of understanding can lead to inadequate performance or increased stress as a faculty member. Negative teaching experiences of faculty members can decrease self-efficacy.

Faculty Preparation and Development

Changes to the role of the faculty member in higher education require alteration in faculty preparation (Austin, 2002). There has been a decrease in higher education budgets, which have often led to cuts in faculty development funding, decreased support for students, and increased pressure to acquire outside funding (Mitchell & Leachman, 2015). Despite these cuts to faculty development, faculty accountability for student learning has increased. The multiple roles faculty play require skills in research, teaching, and service. This requires faculty members to: understand students, learn new technologies, deal with societal demands for accountability, balance the tripartite workload of faculty, and understand the changing job market. Ortlieb, Biddix, and Doepker (2010) have argued that support for faculty should include developing faculty communities that 1) foster positive relationships with other faculty members, 2) encourage partnerships for research, 3) provide a network of support, 4) encourage critical reflection, and 5) offer monthly support groups to help faculty members develop into their roles.

Development programs play a major role in helping faculty members cultivate their roles. Faculty members who participated in a faculty development program reported improved student success and student retention (Perez, McShannon, & Hynes, 2012), as well as having a positive impact on student learning, satisfaction, and motivation (Ambrosino & Peel, 2011; Trigwell, Rodriguez, & Han, 2012). Faculty members who took pedagogical training credits reported higher self-efficacy than those who did not (Postareff, Lindblom-Ylanne, & Nevgi, 2008).

Unfortunately, faculty development workshops are often viewed as just one more item on the "to-do" list and are not necessarily valued. However, well-designed faculty development programs can enhance the quality of teaching and assessment practices (Cillers & Herman, 2010). One study, conducted with over ten thousand full-time, tenure-track faculty, indicated that early career faculty members were more likely to be successful and satisfied with their jobs if resources for professional development are available and a culture of collegiality, collaboration, and community is created within the university (Trower & Gallagher, 2010). Another study indicated that satisfaction with the job and experiencing personal growth explain the greatest variance in the overall job satisfaction score (Foor & Cano, 2011). Their research suggested department chairs and administrators focus faculty development on factors related to individual personal growth and satisfaction. The

support for faculty development is often overlooked by administration but research clearly demonstrates its importance to faculty.

Teacher Self-Efficacy

Most teacher self-efficacy research has been conducted with primary and secondary teachers as participants. Although this provides insight into sample-specific teacher self-efficacy, there are major differences between primary/secondary teachers and post-secondary teachers. A more focused review of teacher efficacy with college faculty revealed that faculty members in public universities had higher a perception of teaching efficacy than those of private universities and faculty members in education reported higher levels of teaching efficacy than those in other disciplines (Chang, Lin, & Song, 2011). Self-confidence in ones' ability to be an educator is lowered when a faculty member is not prepared for the teaching role (Schriner, 2007). Nursing faculty, in particular, had higher levels of teacher self-efficacy when they had formal education courses and teaching experience in nursing and non-nursing settings (Nugent & Bradshaw, 1999). The challenge of being a "good" teacher for faculty members can be overwhelming. It is through mastery experiences and social persuasions that faculty members felt were particularly influential sources of self-efficacy (Morris & Usher, 2010).

Teaching Perspectives

Research on educating adults indicates the importance of having a clearly defined teaching perspective or philosophy (Cranton, 2001; Elias & Merriam, 2005; Galbraith, 2008; Heimlich & Norland, 1994; Jarvis, 1999; Mott, 1996; Zinn, 2004). This teaching perspective or philosophy helps direct faculty members' teaching activities and the approach they take in teaching. Studies show that understanding one's perspective of teaching not only enhances teaching practice, but also engenders a sense of empowerment as a teacher (Cranton, 2001; Heimlich & Norland, 1994). This empowerment and understanding can influence the self-efficacy of faculty, which is particularly critical for college faculty who often work independently in terms of their classroom instruction. Faculty members are also better able to create a positive classroom environment as they understand how and why they teach the way they do.

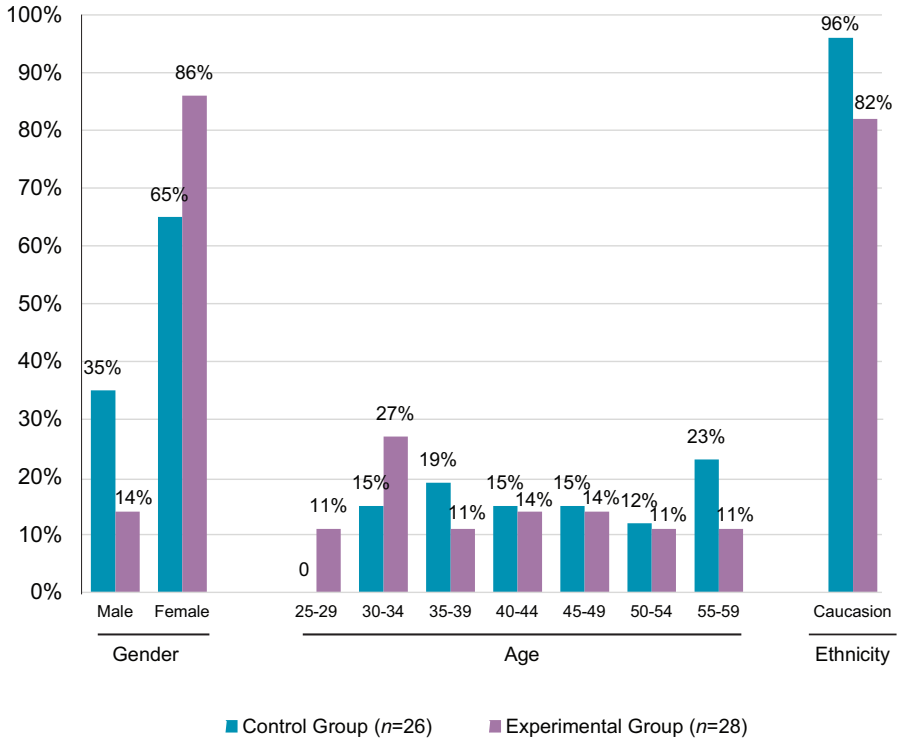
Nursing faculty who reflect trust, empathy, and accommodation of students' different learning needs had students who reported the classroom environment provided more teacher support, time on task, focus, organization, clarity of subject content, involvement, and satisfaction with the class than did students of faculty who did not reflect the aforementioned teacher qualities (Rowbotham, 2010). Interestingly, a later study noted that teachers with an adult education perspective of teaching (i.e., more learner centered) had significantly higher teacher self-efficacy scores (Rowbotham & Whitworth, unpublished).

Research Questions

The changing demands on faculty members, under-developed teaching skills, increased attention to student learning and teaching, and decreased satisfaction with teaching spurred the development of the current project. This research study examined the influence of faculty development on faculty self-assessment of teaching skills and on their teacher self-efficacy. Previous PI-directed research in teaching perspectives, the psychosocial climate of the classroom, and teacher and student self-efficacy identified the need for a program to help faculty members understand their teaching perspectives and develop teaching skills, which should increase their self-efficacy. In turn, increasing self-efficacy should help faculty members teach more effectively and increase their job satisfaction. Therefore, the research questions addressed in this study were:

1. Is there a statistically significant higher gain in teacher self-efficacy after participating in faculty development as compared to those who did not participate?
2. Is there a statistically significant higher gain in teaching competencies after participating in faculty development as compared to those who did not participate?
3. Is there a statistically significant change in teaching perspectives after participating in faculty development as compared to those who did not participate?

Figure 2. Demographic Characteristics of Intervention and Control Groups



Methodology

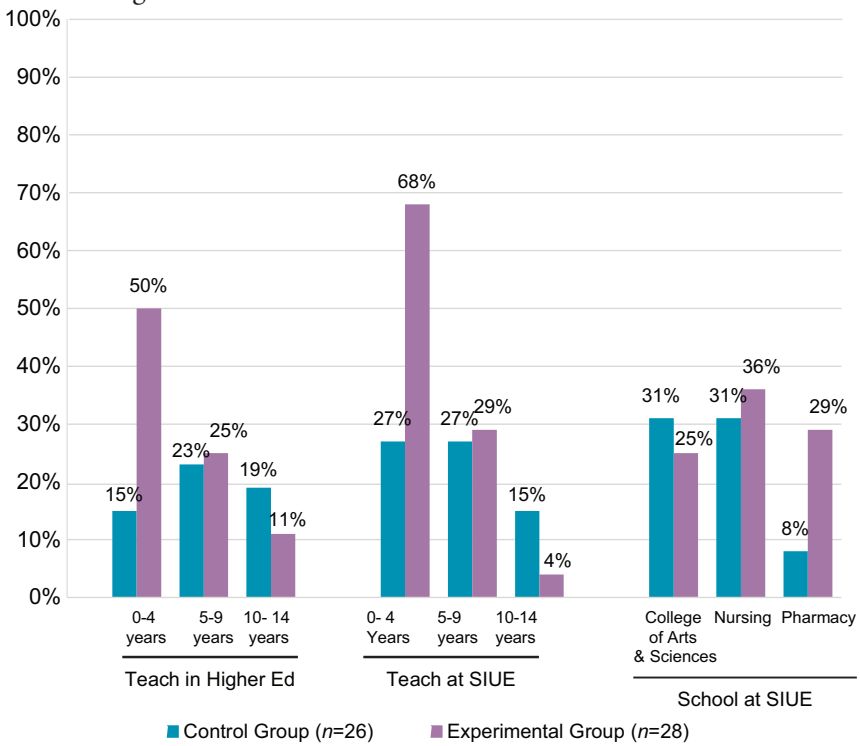
Research Design

This study involves a two-group pre- and post-test quasi-experimental design in which groups were self-selected. The purpose of this study was to identify if a faculty development program influenced teacher self-efficacy, teaching style/perspective, and teacher competencies.

Sample and Recruitment

A sample was recruited from all full-time faculty members at a Midwestern, master's institution, with an email asking them to participate in a faculty development program. Faculty who responded were placed in the intervention group and participated in the two-day summer program and one hour long monthly meetings held throughout the academic year. The face-to-face meetings and required commitment to the program were explained in the email. As an incentive to participate, a drawing for an electronic tablet was held at the end of the academic year. In order to be eligible for the drawing, faculty participants had to have attended the summer sessions and monthly meetings.

A control group of full-time faculty members were also recruited by email. These faculty members completed all quantitative study tools, but did not participate in any of the faculty development opportunities (intervention). Both groups self-selected but were similar in characteristics except for age and years of teaching in higher education. Given the purpose of the faculty development program, it is not surprising that younger and more novice faculty volunteered for the faculty development program. Demographics for each group are included in Figure 2.



Data Collection

After the Internal Review Board (IRB) approval, data were collected by the PI at two points for both the intervention group and the control group. First, data were collected from the intervention group during the initial meeting using the Teacher Self-Efficacy (TSE) scale (Schmitz & Schwarzer, 2000), the Self-Assessment of Teaching Competencies (SATC) which was developed by the PI, and the Instructional Perspective Inventory (IPI; Henchske, 1989 & 1994). The second data collection point occurred at the end of the academic year, with the repeated administration of all three surveys. In addition, an end-of-study evaluation included participants' perceptions of the effectiveness of the program and how it influenced their competence and satisfaction with teaching. These data were collected using an open-ended questionnaire developed by this researcher. The control group completed the TSE, SATC, and IPI at two points: at the beginning and end of the academic year. The control group did not complete the qualitative open-ended questionnaire.

Instruments

▶ *Teacher Self-Efficacy Scale (TSE)*

The Teacher Self-Efficacy (TSE) scale is a ten-item scale that measures self-efficacy related to four major areas of teacher job skills: (a) job accomplishment, (b) skill development, (c) social interactions with students and colleagues, and (d) coping with job stress. The scale consists of a self-reporting four-point Likert response format: not at all true (1); hardly true (2); moderately true (3); exactly true (4). Scores range from 10-40 with higher scores representing higher teacher self-efficacy. The scale was designed as a parsimonious instrument to assess efficacy beliefs within those four areas, and primary focus was on optimizing the validity of the instrument rather than maximizing internal consistency. Cronbach's alpha of the final ten item scale was found to be between $\alpha = .76$ and $\alpha = .82$ in different samples (Schmitz & Schwarzer, 2000).

▶ *Self-Assessment of Teaching Competencies (SATC)*

The instrument is a 15-question, self-reported scale using a Likert response format: not competent (1); somewhat competent (2); competent (3); very competent (4). The questions developed by the researcher reflect 15 teaching competencies identified from adult education literature. Scores range from 15-60 with higher scores indicating faculty perceived themselves as very competent with their teaching skills. The scale was reviewed by three experienced faculty members to evaluate clarity and validity of the questions.

▶ *Instructional Perspective Inventory (IPI)*

The inventory is a 45-item, self-reported and self-scored scale, using a Likert response format: almost never (1); not often (2); sometimes (3); usually (4); almost always (5). Scores range from 45-225 with the higher scores indicating more adult education principles used in their teaching. A factor analysis identified the following seven factors in the IPI: Teacher Empathy with Learners, Teacher Trust of Learners, Planning and Delivery of Instruction, Accommodating Learner Uniqueness, Teacher Insensitivity toward Learners, Learner-

Centered Learning Processes, and Teacher-Centered Learning Processes (Henschke, 1989, 1994). Further reliability and validity were confirmed by Stanton (2005), using the five-point Likert scale used for this study. Reliability was also determined in another study with a Cronbach's Alpha of 0.72 (Rowbotham, 2010).

Permission from the authors to use surveys was obtained and all psychometric data for all tools are strong (Schmitz & Schwarzer, 2000, Henchske, 1989 & 1994). The coefficient α, for the instruments in this study ranged from .763 to .941 (see Table 1). All surveys were collected using a secure online survey tool, Qualtrics (2014). To maintain confidentiality, a unique user ID code generated by Qualtrics was entered at the beginning of each survey so the pre- and post-group responses could be linked together, whereas it was not possible to link responses to specific participants.

Table 1. *Reliability Coefficients*

Instrument	Coefficient α Pre	Coefficient α Post
TSE	.763	.876
SATC	.941	.933
IPI	.858	.879

Intervention: Faculty Development Program

A two-day faculty development program was designed and offered to the university community in the summer of 2014. The primary investigator and other experts from across disciplines provided relevant faculty development material using both an online format and face-to-face meetings during the summer and academic year. The program developed focused on learning effective teaching strategies that promote student academic achievement (see Appendices A & B). Such strategies included: understanding your teaching style, how students learn, developing courses, active learning and engagement strategies, and how to assess learning and motivate students. The faculty development program was designed to help faculty:

1. Develop a deeper understanding of who they are as teachers,
2. Understand how this deeper understanding affects the classroom experience,
3. Apply concepts to enhance their teaching skills,
4. Have increased teacher self-efficacy, and
5. Experience increased satisfaction with teaching.

Following the summer workshop, the group continued to meet monthly throughout the academic year to discuss teaching and learning topics. The primary investigator and intervention group members also provided support and encouragement to other members. The meetings were 60 minutes in length and were either face-to-face or video conference. The meetings included prepared presentations on teaching topics requested by the participants and/or open question and answer discussions. The participants spent an estimated 25 total hours attending meetings and engaging in the learning activities throughout the program. All participants attended the summer program and were encouraged to attend five meetings held during the academic year. Four participants did not attend any of the one hour meetings. A BlackBoard course was also developed with multiple teaching resources (see Appendix B) for participants to use. The use of this site was not required as part of the program but gave the faculty access to further information on teaching. After obtaining participants' consent to participate, access to the online course was provided. At all times, the PI was available to participants to answer questions regarding content and/or program process. Outcomes were measured using the instruments previously described. Data were entered and analyzed following the final data collection.

Data Analysis

Data were analyzed using SPSS 20 (2011) and preliminary assumption testing was conducted to check for normality, linearity, lack of univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multi-collinearity. No serious violations were noted for all statistical tests, Mixed between–within subjects ANOVA was conducted to assess the impact of a faculty development program on teacher self-efficacy, teaching competencies, and teaching perspectives across two time periods (pre and post). The independent between-subjects variable was *Group* (intervention and control), the within-subject variable was Time (pre and post) and the dependent variables were *Teacher Self-Efficacy* (TSE), *Self-assessment of Teaching Competencies* (SATC), and IPI total and IPI subscale (*Teacher Trust*, *Teacher Empathy*, *Planning and Delivery*, *Accommodate, Teacher Centered*, *Learner Centered*, and *Insensitivity*) mean scores.

▶ *Research Question 1*

Is there a statistically significant higher gain in *teacher self-efficacy* after participating in faculty development as compared to those who did not participate?

There was significant interaction between groups and time (Wilks' λ =.872, F (1, 52) = 7.66, p = .008, partial η^2 = .13) indicating a difference in the teacher self-efficacy change over time between the intervention and control groups. There was no significant main effect for time (Wilks' λ = .975, F (1, 52) = 1.35, p =.250, partial η^2 = .03). The main effect comparing teacher self-efficacy of the two groups was not significant (F (1, 52) = 1.30. p =.260, partial η^2 = .02) suggesting no difference between the groups averaged over time. The significant interaction between groups and time indicates that teacher self-efficacy had a differential change over time depending on group. The mean teacher self-efficacy decreased from pre to post in the control group, while the mean of the intervention group increased during this same period (see Figure 3).

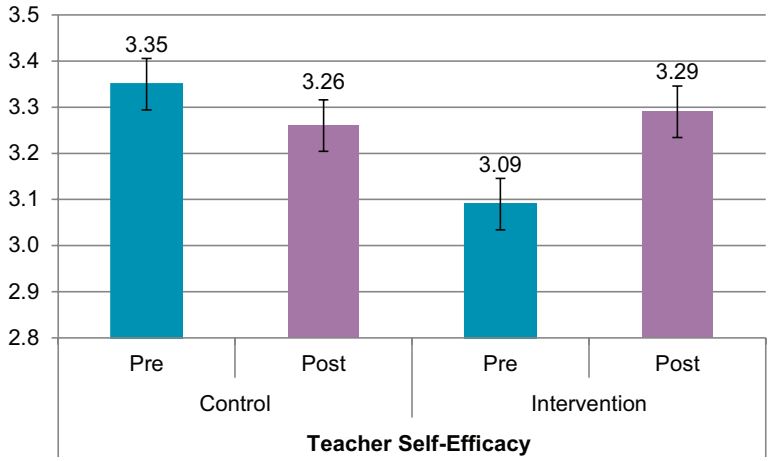


Figure 3. Teacher self-efficacy means.

Research Question 2

Is there a statistically significant higher gain in *teaching competencies* after participating in faculty development as compared to those who did not participate?

There was a statistically significant average increase from pre to post (Wilks' $\lambda = .771$, $F(1, 52) = 15.41$, $p = .000$, partial $\eta^2 = .23$). The main effect comparing the self-assessment of teaching skills of the two groups averaged over time was statistically significantly different, with the control group demonstrating higher mean self-assessment than the intervention group ($F(1, 52) = 1.275$, $p = .000$, partial $\eta^2 = .34$) suggesting a difference between the groups. There was a statistically significant interaction between groups and time (Wilks' $\lambda = .928$, $F(1, 52) = 4.023$, $p = .050$, partial $\eta^2 = .07$) indicating that self-assessment of teaching skills had a differential change over time depending on group. The mean self-assessment of teaching skills for the intervention group increased from pre to post for both groups, with the control group showing a smaller increase (see Figure 4).

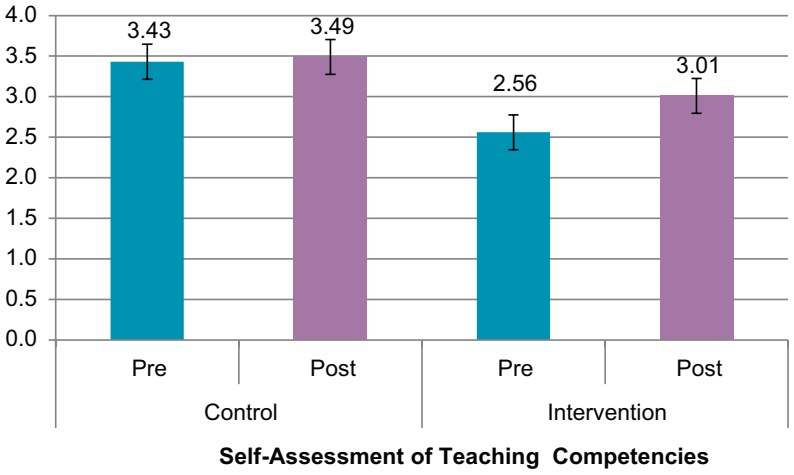


Figure 4. Self-assessment of teaching competencies means.

▶ *Research Question 3*

Is there a statistically significant change in teaching perspectives after participating in faculty development as compared to those who did not participate?

There was no significant interaction between the total IPI score and the groups (Wilks' $\lambda = .999$, $F(1, 50) = .026$, $p = .873$, partial $\eta^2 = .001$) suggesting no difference in the change in teaching perspectives over time between the intervention and control groups (see Figure 5).There was a significant main effect for time (Wilks' $\lambda = .920$, $F(1, 50) = 4.324$, $p = .043$, partial $\eta^2 = .080$) indicating that participants' perspectives regarding their teaching for both groups reflected use of more adult education principles over time.

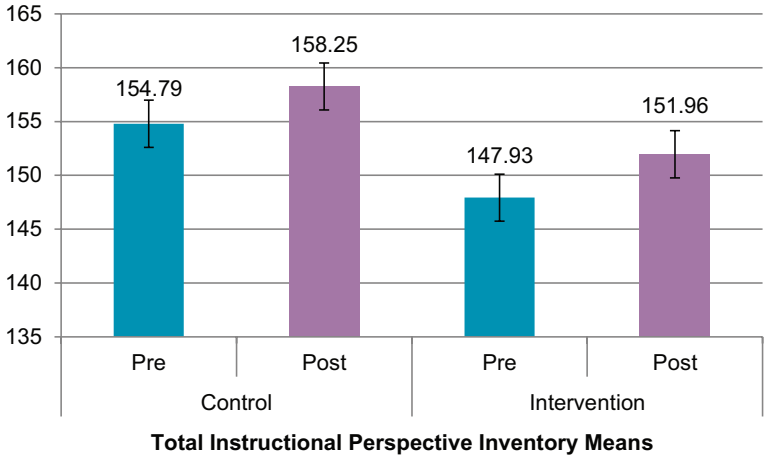


Figure 5. Total Instructional Perspective Inventory means.

The aspects of the faculty instructional perspective were also examined using the seven subscales of the IPI. To control the Type 1 error rate due to the multiple significance tests, false discovery rate (FDR) adjustment was used (Benjamini & Hochberg, 1995). There was a statistically significant interaction between groups and time for the sub category T*eacher Centered* (F (7, 44) = 15.213, p = .0071, partial η^2 = .23) indicating an increase in teacher centered perspective over time for the control group and a less teacher centered perspective for the intervention group (See Figure 6).

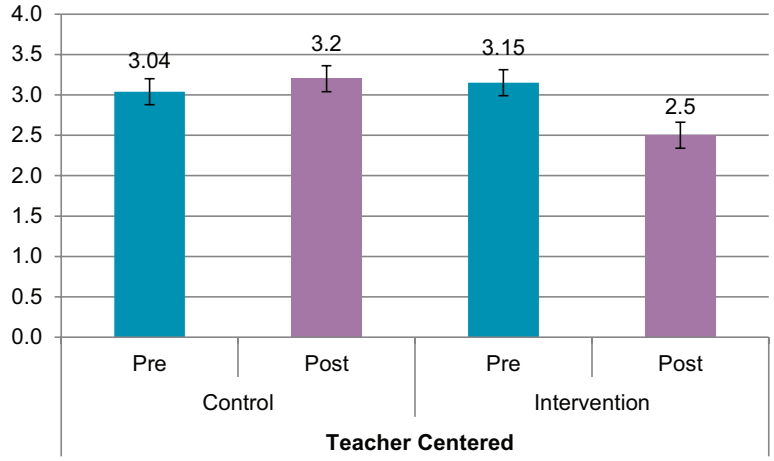


Figure 6. Teacher centered means

There was also a significant main effect for time for *Teacher Empathy* [F(7,44)= 6.633, p =.0286, partial η^2 = .117 (increase)], Planning and Delivery [F(7,44)= 9.118, p=.0071, partial η^2 = .154 (decrease)] *Teacher Centered* [F(7,44) = 5.845, p=.0357, partial η^2 = .105 (decrease)] and *Insensitivity* [F(7,44) = 7.981, p =.0214, partial η^2 = .138 (increase)] (see Figure 5). Averaged over time, the control group reported higher means for T*eacher Empathy, Planning and Delivery*, and *Insensitivity*, while for *Teacher Centered* subscale the control group reported lower means. The between subjects main effect comparing the IPI subscales of the two groups was significant for *Teacher Empathy* (F(7,44) = 3.658, p =.0143, partial η^2 = .129) and *Insensitivity* (F(7,44) = 6.530, p =.0071, partial η^2 = .258) suggesting a difference between the groups for these subscales. The control group reported higher means for *Teacher Empathy* and lower means for *Insensitivity* than the intervention group (see Figure 7), indicating over time participants' teaching perspectives for these subscales changed for both groups. Descriptions for the subscales are included in Table 2.

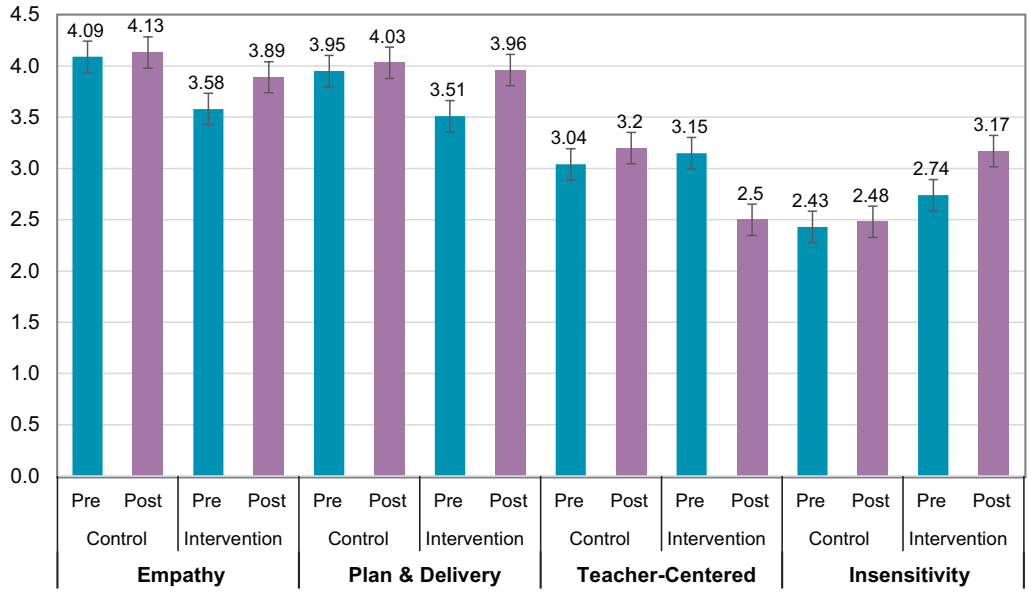


Figure 7. Significant Subscales of Instructional Perspective Inventory means.

Table 2. *Descriptions of Instructional Perspective Inventory subscales*

Instructional Perspectives Inventory Subscales	Explanation
Teacher Trust of learners	Extent teacher express confidence in students' ability to learn material and to know own needs and aspirations, supportive
Teacher Empathy with learners	Extent teacher recognizes and promotes self-esteem of students
Planning and Delivery of instruction	Extent the teacher uses new and variety of teaching methods and establishes learning objectives, and integrates techniques with content
Accommodating learner uniqueness	Extent the teacher believes each student learns different and adjust accordingly
Teacher Insensitivity toward learners	Extent the teacher is unable to understand students' point of views and gets inpatient with how and when students learn
Teacher-Centered learning processes	Extent the teacher provides the information, teaches clearly so no questions are needed, and teaches exactly what and how they have planned (focused on their agenda)
Learner-Centered learning process	Extent the teacher uses experienced-based learning techniques and student participation in the class planning (focused on the learning)

The post-program feedback from the intervention group indicated the faculty perceived the program as helpful, effective, and impacted their teaching (see Table 3).

Table 3. *Post Program Feedback from Intervention Group*

Most Impact (*n*=24)
2 Day Workshop (67%)
Monthly Meetings (21%) stated the feedback from other instructors and learning from their experiences was helpful
Blackboard Course (4%)
All of it (8%)
Least Impact (*n*=24)
2 Day Workshop (9%)
Monthly Meetings (22%)
Blackboard Course (57%) mainly because "haven't looked at it"
All of it (4%)
Nothing (4%)
No response (9%)
Did you change your teaching in anyway as a result of this program? (*n*=28)
Yes 82%
No 18%
How it changed my teaching?
More active learning and engaging students
More open dialogue and asking questions
Positive learning environment
More aware of type of learners
Not being afraid to try something new
Did you develop any class activities from any of the ideas you learned? (*n*=28)
Yes 64%
No 36%
Will you continue to use the activity? (*n*=27)
Yes 86%
No 14%
How successful or helpful were the activities? (*n*=21) (0= not successful to 5= very successful)
Mean 3.14 out of 5 SD 1.39
To what extent did the activities accomplish their intended goals? (*n*=21) (0= did not accomplish goals to 5= fully accomplished goals)
Mean 3.33 out of5 SD 1.46
If you did not develop activities, please explain why.
I already incorporate many of the ideas
Have trouble thinking of ways to adapt activities into my existing lecture topics
Many of the courses I teach in aren't my courses so I have to fit in with someone else's framework
Busy, not enough time
I was only in the lab so a variety of activities are already in place
Not pertinent to my subject area

Discussion and Implications

Teacher Self-Efficacy

Having a belief that one can be successful is a critical component of teaching. A strong faculty development program designed within an encouraging environment, evidence-based practices and targeted to the unique needs of university faculty, will help faculty develop competence in teaching as well as improve teacher self-efficacy. The findings from this study showed statistically significant results between the control and intervention groups and the pre- and post-mean scores, but no statistically significant changes in the scores over time in general or between the groups themselves. This indicates that participation in a faculty development program can influence how faculty feel about their role as a teacher and can increase teacher self-efficacy, but there is not a change in teacher self-efficacy as a whole or just by group. These results are also supported in the literature (Persellin & Goodrick, 2010; Trower & Gallager, 2010; Schriner, 2007) and by the qualitative survey responses from the intervention group. Additionally, Bandura's (1997) theory of the sources of self-efficacy is supported by these findings. The participation in the faculty development program that utilized skillful presenters afforded an opportunity for faculty members to observe good teaching (social modeling), to participate in discussion that provided feedback about their teaching (social persuasion), and most important, to implement the skills learned in the courses they were teaching, thus creating a positive experience (emotional and physical reaction). The results of this study indicated that the intervention group reported an increase in teacher self-efficacy while the control group reported a decrease, suggesting that faculty development can increase teacher self-efficacy and can also influence satisfaction with teaching. These results raise the question as to why the control group ratings decreased, which warrants further research.

Teaching Skills

The development of teaching competencies can be challenging for many faculty. Previous research reported faculty were more successful and satisfied with their teaching if faculty development was made available for them (Trower & Gallager, 2010). Analysis of the assessment of teaching competencies indicated a significant difference between pre- and post-scores and between the control and intervention groups. It is often assumed that teaching skills become better over time, and this study supports this notion. Although the intervention group reported lower mean scores on both the pre- and post- scores than the control group, there was in increase in the scores for the intervention group and a decrease on the post-score for the control group. This indicates participating in a faculty development program influences the perception of teaching skills. The lower pre-scores may be explained by between group differences in teaching experience to begin with, and may also explain why the participants in the intervention group wanted to join the faculty development program from the outset.

Teaching Perspectives

Teaching perspectives are how a faculty member philosophically approaches and then conducts moments of instruction. Faculty members determine how subject matter is planned, information is presented, learning activities are structured and conducted, and student interaction is established (Heimlich & Norland, 1994). As faculty members understand their perspectives and how these influence the classroom, faculty members increase their beliefs that they can be successful. Cranton (2001) suggests that faculty members who know who they are as teachers are more authentic and create a better teaching and learning exchange. In this study, there was significant difference between the pre- and post-total IPI score for all study participants combined. The post-scores were higher than pre-scores indicating that adult education perspectives and principles were used more frequently. However, there were no significant differences between the control and intervention groups and no significant differences between group and pre- and post-scores, indicating that the faculty development program did not influence this growth in total IPI scores.

To further understand teaching perspectives, the subscales indicated that *Teacher Trust*, *Teacher Empathy, Planning and Delivery*, and *Insensitivity* significantly increased for both groups combined. *Teacher Centered* mean scores in the intervention group decreased, indicating the faculty's perceptions of their teaching became less focused on the teacher and more on the learner, whereas teacher centeredness increased over time in the control group. This finding is consistent with the possibility that the faculty development program had an effect on becoming a more student centered instructor. Surprisingly, faculty perceived they were less able to understand students' points of view and more inpatient with how students learn on the post-test than they were on the pre-test (*Insensitivity*) across both groups combined. This could reflect the end of the academic year frustration or possible misunderstanding of learners from different generations. On the other hand, the faculty reported increased awareness and promotion of learner self-esteem, and increased confidence in students' abilities to learn the material, which supports learning rather than hinder it. There was a significant difference between groups averaged across pre- and post- scores for *Teacher Empathy* and *Insensitivity*. The control group reported higher means on *Teacher Empathy*, indicating more perceived ability to recognize and support the self-esteem of students. The intervention group perceived themselves as more likely to be frustrated with students than did the control group, which might suggest why they wanted to participate in the faculty development program.

Participation in faculty development programs also plays a central role in faculty motivation and satisfaction with their careers, and can improve the academic experience for teachers and for students. When teachers understand how students learn, they can share their expertise more effectively. With the knowledge gained from faculty development programs, faculty can develop greater self-efficacy and a broader understanding of effective teaching at the university level. Moreover, these results help fill a gap in research related to teacher self-efficacy and teaching competencies.

Limitations of Study

Although the findings of this research are encouraging and shed light on post-secondary teacher self-efficacy, teaching skills and teaching perspectives, there were several limitations identified. The sample size was small and participants in the groups were self-selected and not randomly assigned, limiting the generalizability of the findings. The implementation of the faculty development program also required a long-term commitment, which supported the decision to have the participants self-select into the program, but limited the full impact of the treatment. Five of the 28 participants did not participate in any of the five monthly meetings during the academic year. These five participants completed the post-survey, but their lack of participation in the meetings may have influenced their perception of their self-efficacy, teaching skills, and teaching perspectives. Another limitation of the study was the use of self-reporting, which carries a risk that participants will answer the way they think they should or the way they want to be viewed. For this reason, there is a degree of trust that needs to be developed between the researcher and the participants so that the participants will be honest in their responses.

Implications for Future Research

Replication of this study with larger groups and with random assignment is needed. Further research is also needed with faculty in community colleges and minority faculty in all settings. Other questions that arose from this study relate to the subscales on the IPI and why some behaved differently than others. Larger and more diverse groups may enhance these findings. A qualitative study might also give further insight into teacher self-efficacy. This study also leads to questions about why some faculty member chose to participate in faculty development and why others do not. A future study on teacher self-efficacy and the empowerment of faculty members to make changes in their teaching would help answer this question.

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Appendix A

Summer Immersion Schedule
"If you T.E.A.C.H., they will come"

Day 1	Topic
9:00-10:00	Introduction
10:00-10:45	What Makes a Good Teacher
11:00-12:00	Getting to Know Yourself as a Teacher
12:00-1:00	Lunch
1:00–2:00	How Students Learn
	Break
2:15- 3:00	Learner-Centered Teaching
3:00-4:00	Engaging Students

Day 2	
9:00-9:45	Designing Learning
9:45-10:30	Generating Motivation in Learning
10:30-10:45	Break
10:45-12:00	Assessing Learning
12:00-1:00	Lunch
1:00–2:15	Classroom Management
2:15-2:30	Break
2:30–4:00	Technology in Learning

Appendix B

Welcome & Overview of Faculty Development

Faculty Role

Module: Transition to Faculty Role

- Interviews of newer faculty members
- How to make the transition to faculty member

Module: Teaching Perspectives

- Overview of teaching perspectives
- Self–Assessment links
- Articles that describe different self–assessments

Module: Who am I and Self-Efficacy

- Overview of understanding ourselves
- "To Thine Own Self Be True" Presentation
- Understanding and developing self-efficacy
- Application Activities

How People Learn

Module: Overview

- Overview of learning in adult education
- Teaching learning process
- Teaching across generations
- Application Activity

Module: Active Learning

- "Active Learning: Get Their Gears Going"
  - Captivate movie
- Active Learning strategies and ideas
- Application Activity

Module: Learning Styles

- "Learning Styles: A Team work Approach"
  - Presentation
- Learning styles strategies and ideas
- Application Activity

Module: Developing Critical Thinking

- Overview presentation
- Helping students–classroom
- Helping students–clinical/practicum
- Application Activity

Module: Motivating Students

- Principals/suggestions
- Application Activity

Games- folder with game templates

- Articles/EBP

Curriculum

Module: Curriculum Development

- Designing courses

Module: Learner Centered Teaching

- Overview of learner-centered teaching
- Examples of teaching videos
- Discussion activity

Module: Writing Learning Objectives

- Overview of Bloom's Taxonomy
- Writing learning objectives (3 items)
- "Professor Dancelot and the Perils of a Misaligned Course"
- Application Exercise

Classroom

Module: Classroom Teaching at SIUe

- Conducting the first day of class
- Lecturing
- Leading Discussion

Module: Classroom Management

- Overview
- Creating an environment conducive to learning
- Conflict resolution
- Test review strategies
- Application activity

Assessment/Evaluation

Module: Assessment/Evaluation

- Overview
- Using classroom assessments
- Test administration
  - How to prevent/handle cheating
- Application Activity

Module: Test Construction

- Using Bloom's Taxonomy
- Writing test blueprints
- How to write good test questions
- Using alternate format questions
- Application Activity

Module: Test Analysis

- How to analyze an exam
- Application Activity

Mentoring Students

Module: Mentoring Students

- Overview
- Suggestions
- Application Activity

Technology

Module: Technology

- Technology in the classrooms
- Telecommunication courses
- Online teaching
- Other technologies
- Educational APPS

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