



# A LONGITUDINAL STUDY EXAMINING STUDENT EVALUATION SCORES AND A FACULTY DEVELOPMENT PROGRAM

Blake C. Colclasure, Sarah E. LaRose, T. Grady Roberts, R. Elaine Turner, & Allen F. Wysocki



# Introduction

- College grads need critical thinking and problem solving skills (Easterly III et al., 2017; NRC, 2009)



- Shortage of prepared grads; postsecondary institutions need to provide opportunities to advance these skills (Selling, 2013)



- Effective teaching should be a priority in postsecondary education. Need to improve teacher effectiveness (Boyer, 1990)



- Provide PD opportunities to faculty to maximize educational impact and cater to faculty needs

# Previous Literature

- Faculty have requested that PD focus on...
  - Student motivation strategies (Rocca, 2010)
  - Development of student critical thinking & problem solving skills (Rocca, 2010)
  - Evaluation of student learning (Rocca, 2010)
  - Updated teaching methods to engage students both face-to-face and online (Bjelland & Sprecher, 2014; Blickenstaff, Wolf, Falk, & Foltz, 2015; Wingenbach & Lander, 2002)

# Previous Literature

- Design and Delivery of PD
  - PD should be learner-focused, context-specific, and have practical application (Schlager & Fusco, 2003)
  - Professional learning communities (Lieberman & Mace, 2010)
  - Consider demographic differences (Stedman, Roberts, Harder, Myers, & Thoron, 2011)

# Conceptual Model

- Desimone's (2009) Path Model of Teacher Professional Development

## Core features of PD:

- Content Focus
- Active Learning
- Coherence
- Duration
- Collective Participation

Increased teacher knowledge & skills; Change in attitudes & beliefs

Change in Instruction

Improved Student Learning



Teacher's College Faculty Development



Change in Instruction



Assessed through EOC Evaluations

# Teacher's College



- Enhance teaching skills of newer CALS faculty
- Allow faculty to engage as a community of practice around learner-centered teaching
- Meet multiple times throughout semester focusing on topics including:
  - Planning, backward design, learning objectives
  - Teaching philosophy, teaching style
  - Teaching and managing labs
  - Assessing student learning
  - Active learning strategies
  - Engaging students

# Purpose/Objectives

- **Purpose:** Determine if the faculty development (FD) program influences participants' student evaluation scores.
- **Objectives:**
  1. Compare each participant's student evaluation scores before the FD with their evaluation scores after the FD.
  2. Compare each participant's student evaluation scores before the FD with their evaluation scores during the semester of the FD.
  3. Compare all participants' student evaluation scores before, during, and after the FD with their home department's student evaluation averages.

# Methodology

- Course evaluations were collected for all courses taught by FD participants from 2012 to 2016
- Included courses taught prior/during/after semesters of FD enrollment

Year of FD Participation	Number of Participants ( <i>n</i> )
2012	9
2013	31
2014	16
2015	16
2015 (Advanced TC)	10
2016	23
	N = 105 participants total



# Methodology

- Instructor rating average  
(5-point Likert scale: 1=Poor to 5=Excellent)
- Overall N = 1, 593 courses analyzed at various stages of FD completion

Objective	Statistical Analysis Applied
1	<u>Paired samples t-test</u> comparing same instructor rating averages for courses before to courses after FD completion
2	<u>Paired samples t-test</u> comparing same instructor rating averages for courses before to courses during FD completion.
3	<u>Descriptive statistics</u> : Compare participants' course evaluation means (before, during, and after) against same semester and grade-level (undergraduate/graduate) means of their home department.

# Results – Objective 1

**O1**: *Compare each participant's student evaluation scores before the FD with their evaluation scores after the FD.*

Student Evaluation Scores	n	M	SD
Prior to FD	53	4.30	0.48
After FD Completion	53	4.44	0.30

*Note: Scale for instructor evaluations: 1=Poor, 2= Below Average, 3=Average, 4=Above Average, 5=Excellent*

**Paired samples t-test statistically significant with  
p-value of .015**

# Results – Objective 2

**O2**: *Compare each participant's student evaluation scores before the FD with their evaluation scores during the semester of the FD.*

Student Evaluation Scores	n	M	SD
Prior to FD	51	4.33	0.50
During FD Completion	51	4.51	0.46

*Note: Scale for instructor evaluations: 1=Poor, 2= Below Average, 3=Average, 4=Above Average, 5=Excellent*

**Paired samples t-test statistically significant with  
p-value of .001**

# Results – Objective 3

**O3:** *Compare all participants' student evaluation scores before, during, and after the FD with their home department's student evaluation averages.*

Course Evaluations	FD Participant Evaluations			Dept Evaluation Means	
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Undergrad Courses	151	4.44	0.53	4.43	0.19
Graduate Courses	120	4.47	0.62	4.52	0.18
All Courses	271	4.45	0.57	4.47	0.19

Note: Scale for instructor evaluations: 1=Poor, 2= Below Average, 3=Average, 4=Above Average, 5=Excellent

**Pre-FD completers had very similar or slightly lower evaluation scores compared to department means.**

# Results – Objective 3

**O3:** *Compare all participants' student evaluation scores before, during, and after the FD with their home department's student evaluation averages.*

Course Evaluations	FD Participant Evaluations			Dept Evaluation Means	
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Undergrad Courses	66	4.49	0.48	4.39	0.29
Graduate Courses	42	4.59	0.49	4.58	0.12
All Courses	108	4.53	0.48	4.47	0.26

Note: Scale for instructor evaluations: 1=Poor, 2= Below Average, 3=Average, 4=Above Average, 5=Excellent

**Course evaluation means were slightly higher for participants' during the semester of FD enrollment compared to their department mean averages.**

# Results – Objective 3

**O3:** *Compare all participants' student evaluation scores before, during, and after the FD with their home department's student evaluation averages.*

Course Evaluations	FD Participant Evaluations			Dept Evaluation Means	
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Undergrad Courses	676	4.36	0.64	4.29	0.25
Graduate Courses	434	4.46	0.61	4.50	0.17
All Courses	1,110	4.40	0.63	4.38	0.24

Note: Scale for instructor evaluations: 1=Poor, 2= Below Average, 3=Average, 4=Above Average, 5=Excellent

**Student evaluation means of all courses were slightly higher for FD completers compared to department evaluation means of the same semesters.**

# Implications/Conclusions

- Participation in FD Teacher's College demonstrated slightly higher student evaluation ratings
- Faculty Development has potential for wide-ranging impact

## Limitations:

- Caution should be taken when analyzing data as many factors may have improved teaching performance in addition to the FD program (familiarity of course, years of teaching experience, mentorship, etc.)
- Instructor effectiveness is measured by student perceptions
- Study did not account for individual student differences in knowledge and intelligence

Thank you!

What questions are there?

FOR THE

#GATORGOOD