The background is a dark teal gradient. In the corners, there are decorative white line-art patterns resembling circuit boards or neural networks, with lines connecting to small circles.

Faculty Engaging Students Online: A Mixed- Methodology Investigation

Maureen Andrea Powers, EdD

BACKGROUND, PROBLEM, PURPOSE

Background

- Demand for online courses is increasing
- Innovative recruitment strategies
 - 40+ start days each year
 - Courses designed without student-to-student interaction

Problem

- No professional development (PD) for online faculty to address the lack of student-to-student interaction
- No PD about how to enhance faculty-to-student engagement

Purpose

- The purpose of the study was to provide a deeper understanding of the benefits of faculty-to-student interaction and effective PD design for online faculty

THEORETICAL FRAMEWORK AND THE RESEARCH STUDY

Engagement Theory (ET)

Learners and instructors must be engaged in order for learning to take place

ET provides the theoretical framework for the PD design

Effective student engagement techniques

Building faculty-to-student academic relationships

Collaborative Learning Theory (CLT)

Engagement and collaboration are critical for learning

CLT provides the theoretical framework for the PD design

Online instructors learn and collaborate in Professional Learning Communities (PLCs)



LITERATURE REVIEW-CATEGORIES



LITERATURE REVIEW BRIEF

Relationships and collaboration are important to learning

- Lugar-Brettin (2013)
- Oliphant & Branch-Mueller (2016)
- Schroeder, Baker, Terras, Mahar & Chiasson (2016)

Instructor interactions, meaningful feedback, and rapport are effective strategies for student engagement online

- Dzubinski (2014)
- Ekmekci (2013)
- Jenkins et al. (2012)
- McGuire (2016)
- Nye (2015)
- Queiros & De Villiers (2016)

Virtual faculty development is effective and desired by online educators

- Adnan et al., (2017)
- Mohr & Shelton (2017)
- Vandenhouten et al. (2014)

Professional communities of practice (CoPs) identified as effective PD activity

- Considine et al. (2014)
- Golden, (2016)
- Lai et al. (2016)
- Sheffield et al. (2018)

THE GAP

Research regarding best practices for the development of faculty teaching in asynchronous online learning formats without benefit of student-to-student interaction is missing from the literature.

FILLING THE GAP

Informational Presentation (IP)

Building Academic Relationships

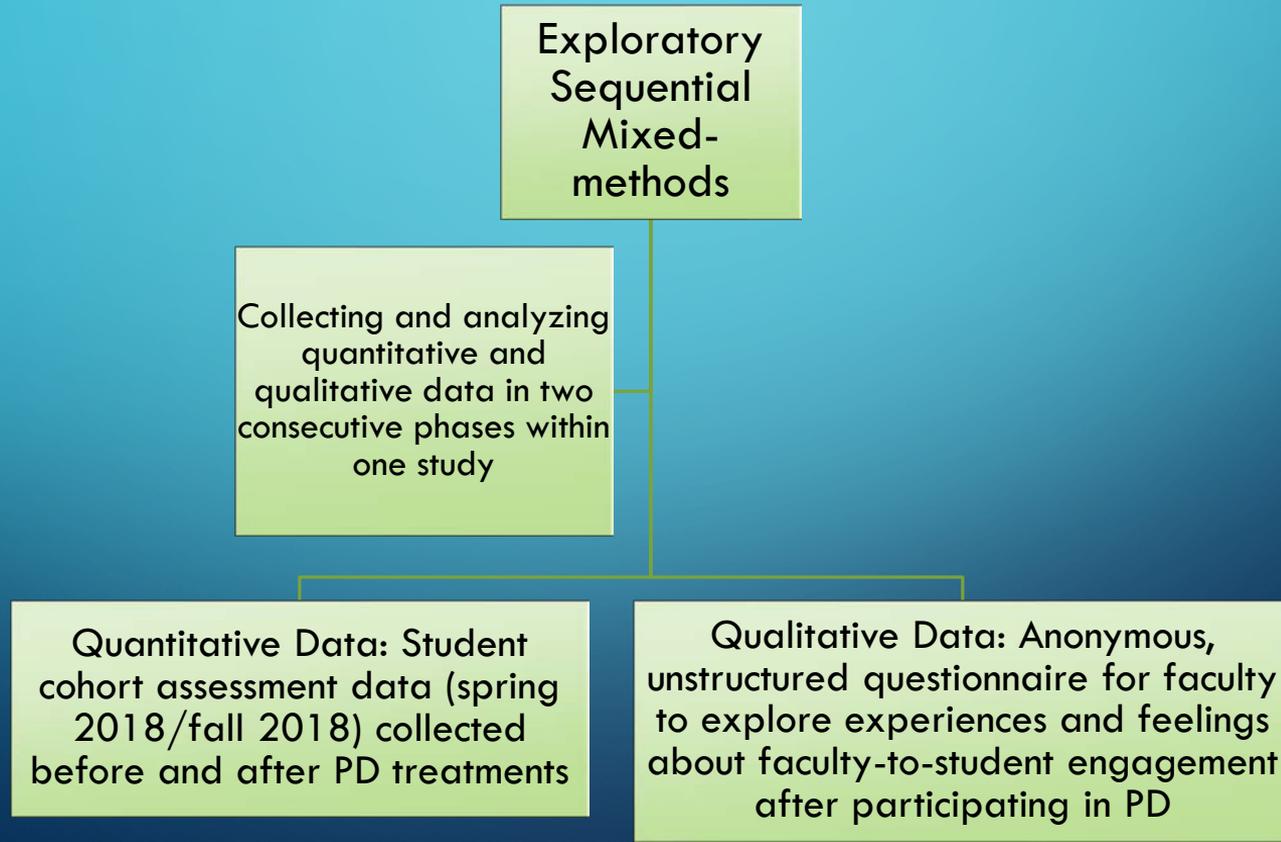
- Establish Rapport
- Strong Communication
- Humanizing the Course
- Frequent Monitoring
- Prioritizing Feedback
- Extending the learning

IP Followed by PLC

Framework for virtual meetings

- Share examples from practice
- Celebrate successful techniques
- Discuss challenges
- Identify additional needs

METHODOLOGY: RESEARCH DESIGN



TREATMENT INTERVENTIONS

TX A: IP



- Informational slide show based on the work of McGuire (2016)
- Delivered virtually
- Viewed by all research participants in the study

TX B: PLC



- View IP
- Participation in four virtual PLC meetings
- Review concepts from the presentation
- Engage in collaborative conversations with faculty

ONLINE ENGAGEMENT

Several frameworks for online engagement have emerged in the literature (McGuire, 2016; Pittaway, 2012; Redmond, Abawi, Brown & Henderson, 2018).

ENGAGEMENT THEORY & COLLABORATIVE LEARNING THEORY

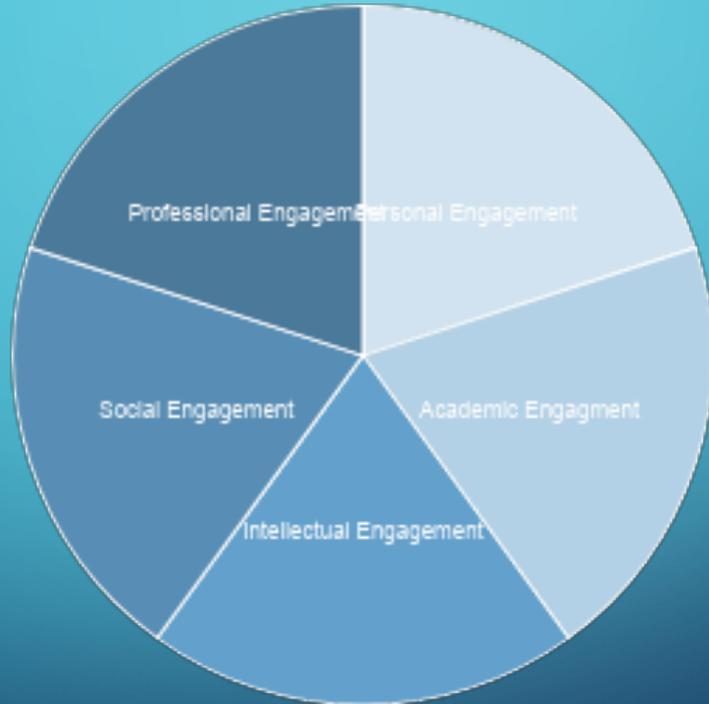
Each framework is based on engagement theory (ET) and contends several components are important for engagement in online learning environments which are multidimensional and overlapping.

The opportunity to develop relationships with others as part of a group is one of the central principles of engagement theory (Dyment, et.al., 2013; O'Shea, et. al., 2015).

3 TENANTS OF ENGAGEMENT

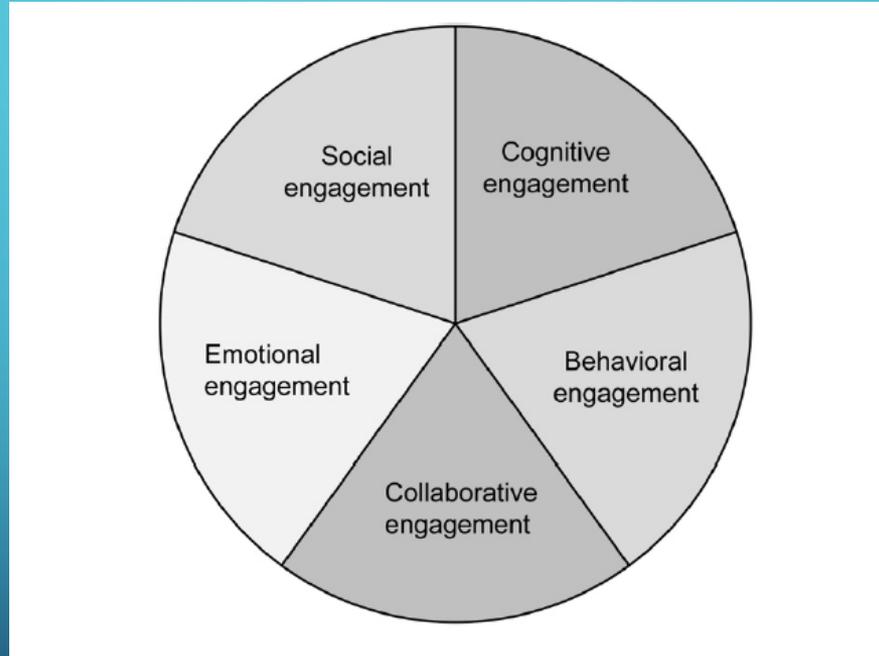
- *Relate* (interactions and rapport)
- *Create* (learner choice and control of learning)
- *Donate* (contributions to greater community, authentic learner tasks)

(O'Shea, Stone, & Delahubty, 2015)



PITTAWAY, 2012

Redmond, Abawi, Brown & Henderson, 2018



3 IMPORTANT FORMS OF INTERACTION ONLINE

- learner-to-content
- learner-to-instructor
- learner-to-learner

McGuire, 2016

INSTRUCTORS ARE KEY FACTORS IN STUDENT ENGAGEMENT AND STUDENT SUCCESS

- Instructors need to engage in teaching in order to facilitate high levels of learning (Dyment, Downing & Budd, 2013; Pittaway, 2012).
- The social presence of the instructor may be one of the most important relationships an online learner has within a program (Schroeder, Baker, Terras, Mahar & Chiasson, 2016).

FACULTY TO STUDENT ENGAGEMENT

- The manner in which faculty and students interact with one another is critical for the success of adult learners (Chickering & Gamson, 1987).
- “Instructors need to be visible to, engaged with, and caring for the students every step of the way throughout the journey on which they embark together” (Ekmekci, 2013, p. 34).

BUILDING ACADEMIC RELATIONSHIPS

Establishing academic relationships between faculty and students is documented as one feature of student engagement in online education (Dyment, Downing & Budd, 2013; Redmond, Abawi, Brown & Henderson, 2018).

PROMISING TECHNIQUES FOR BUILDING ACADEMIC RELATIONSHIPS

- Establish rapport
- Strong communication
- Humanizing the course
- Frequent monitoring
- Prioritizing feedback
- Extending learning

McGuire, 2016

LIMITATIONS AND DELIMITATIONS

- **Limitations: Transferability and Dependability**
- Very small number of online faculty from the educator preparations department at a single college
- Differences between student taking courses in the spring and fall could not be controlled
- Student assessment measures were varied (formative, summative)
- **Delimitations**
- College faculty teaching asynchronous online courses in the educator preparation programs in AZ
- Online courses designed without student-to-student interaction
- Student outcomes aggregated by cohort in the same courses taught by faculty in two consecutive semesters
- Student assessment measures included assessments while PD was in process

RESEARCH QUESTION 1

To what degree are student outcomes effected when faculty receive professional development on strategies for engaging students in courses without student-to-student interaction?

- $H1_0$: There will be no significant difference on mean student cohort grades on summative assignments before and after the Informational Presentation professional development activity.
- $H1_A$: Mean student cohort grades on summative assignments after the provision of an Informational Presentation will be significantly higher than mean cohort grades on summative assignments prior to the professional development activity.

RESEARCH QUESTION 2

To what degree are student outcomes effected when faculty receive professional development on strategies for engaging students in courses without student-to-student interaction followed by participation in a professional learning community?

- H_{2_0} : There will be no significant difference on mean student cohort grades on summative assignments before and after the Informational Presentation professional development activity followed by participation in a Professional Learning Community.
- H_{2_A} : Mean student cohort grades on summative assignments after the provision of an Informational Presentation followed by participation in a Professional Learning Community will be significantly higher than mean cohort grades on summative assignments prior to the professional development activity.

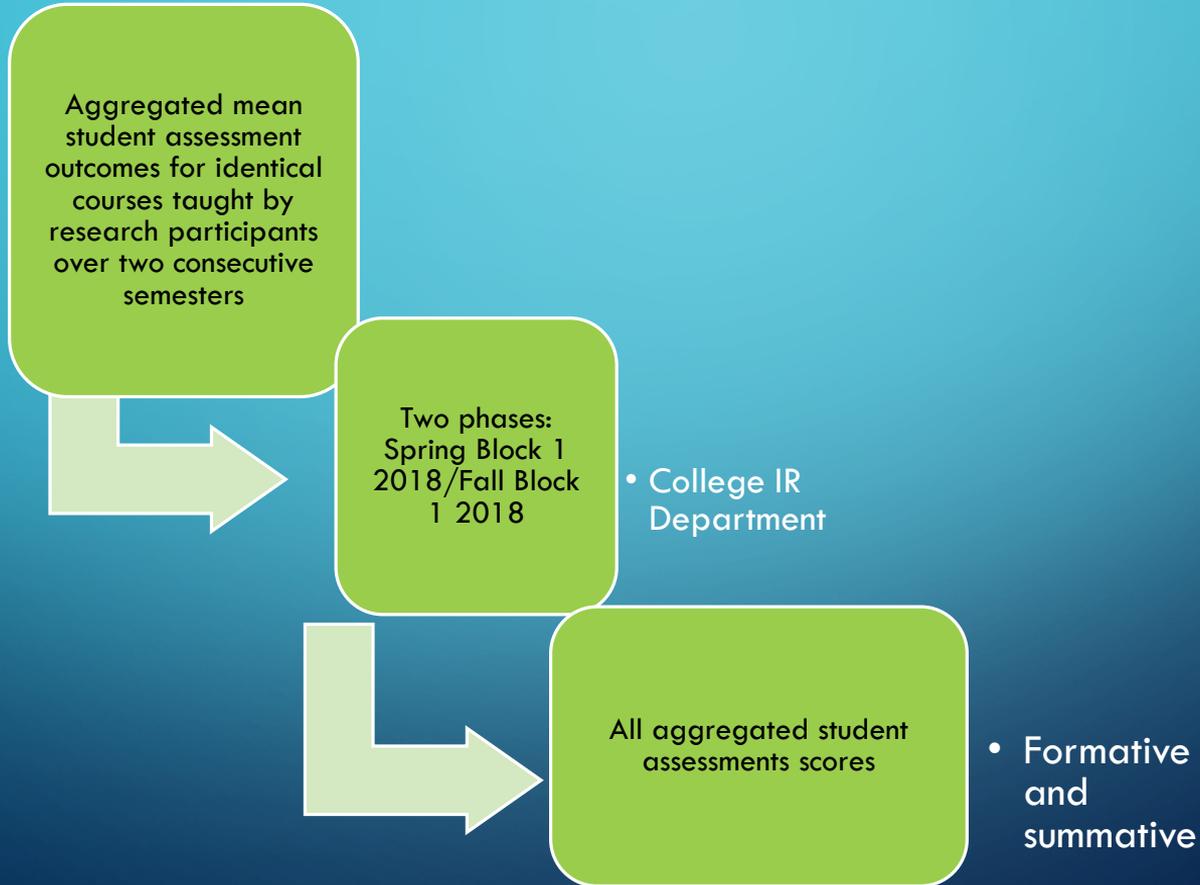
RESEARCH QUESTIONS 3 AND 4

3. How do faculty feel about faculty-to-student engagement in online courses after receiving professional development on strategies for engaging students in courses without student-to-student interaction as measured by unstructured questionnaires?
4. How do faculty feel about faculty-to-student engagement in online courses after receiving professional development on strategies for engaging students in courses without student-to-student interaction, followed by participation in a virtual professional learning community as measured by unstructured questionnaires?

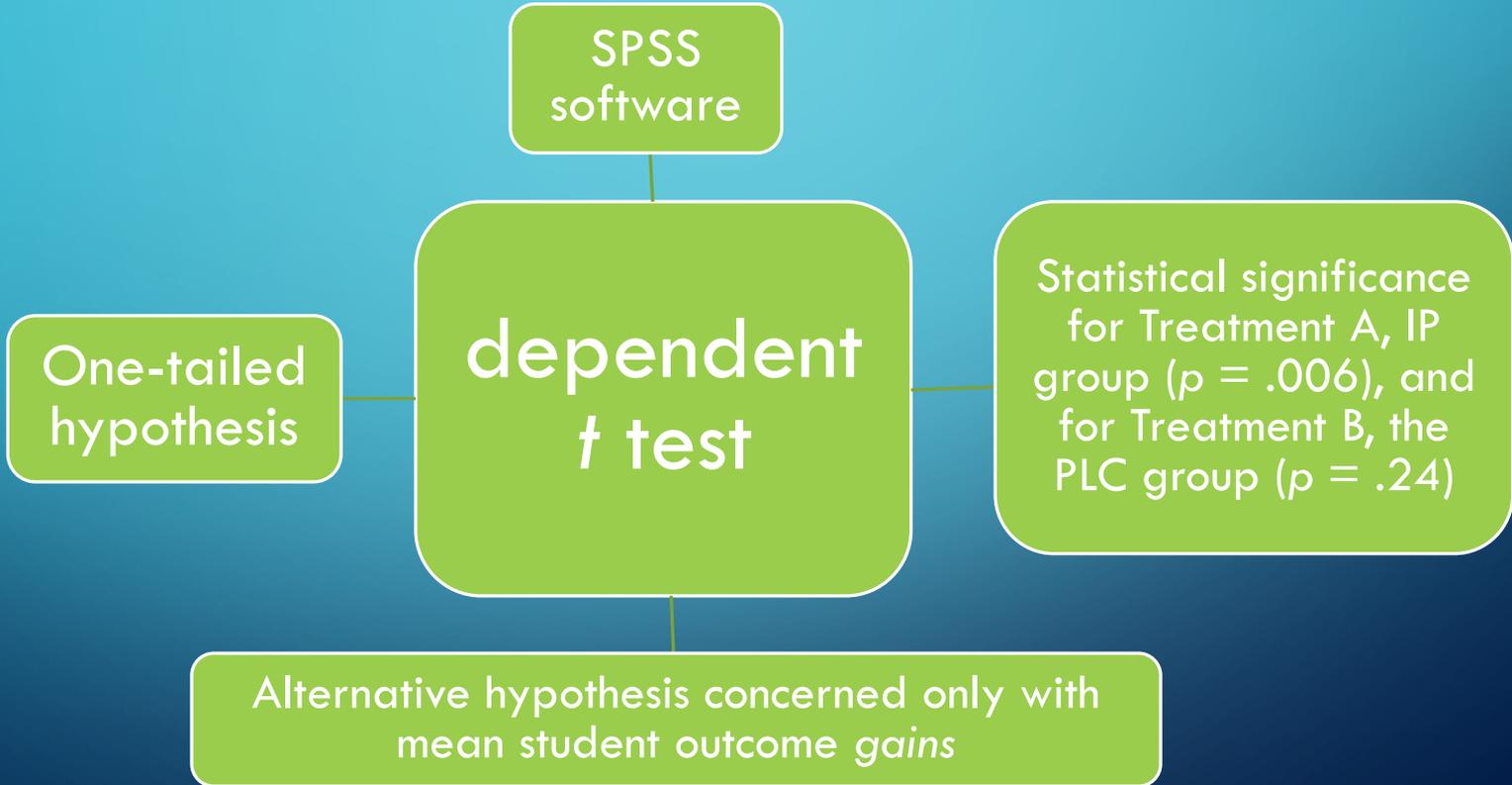
SAMPLING PROCEDURES

- Purposeful sampling
 - Target sample size 53 for the quantitative and 20 for the qualitative
- Faculty
 - Full-time and adjunct faculty in the educator preparation programs department
- Inclusion criteria
 - Teach one asynchronous online course consecutively in the educator preparation program
- Twelve faculty recruited
- Research participants selected for treatment conditions by simple random assignment without stratification

QUANTITATIVE DATA COLLECTION



QUANTITATIVE DATA ANALYSIS



MEAN STUDENT SCORES-IP

Table 3|

Mean Student Scores for Informational Presentation

Informational presentation	<i>N</i>	Mean	<i>SD</i>
IP baseline	6	95.5	3.61
IP after treatment	6	90.8	3.5

- The alternative hypothesis is concerned only with higher student outcomes

- The decision was made to fail to reject the null hypothesis because no significant difference was found in greater mean student outcome scores from before to after the IP PD intervention

MEAN STUDENT SCORES-PLC

Table 4

Mean Student Scores for Professional Learning Community

Professional learning community	<i>N</i>	Mean	<i>SD</i>
PLC baseline	3	90.3	6.02
PLC after treatment	3	92.3	2.01

- The difference in mean student gains of two percentages were not significantly different
- The decision was made to fail to reject the null hypothesis because there is no significant difference in mean student scores from before to after the PLC PD intervention

EFFECT SIZE

IP treatment group



- Correlation $.657$ resulted in $.43$ effect size
- 43% of the difference in mean student scores before and after the IP treatment can be explained by the intervention

PLC treatment group



- Correlation $.983$ resulted in effect size of $.966$
- The correlation and effect size indicate 96.6% of the variance in mean student outcomes can be explained by the treatment condition

QUALITATIVE MEASUREMENT INSTRUMENTS

Qualitative data: Anonymous unstructured questionnaire created using SurveyMonkey

CAQDAS software: QDA Miner Lite used to manage and assign codes, identify frequencies, analyze narrative responses

CODING: PROCEDURES AND PROCESSES

- Open Coding used to determine the categories/themes
- Narrative responses reviewed for common key words and ideas
- Each narrative response examined for similarities and differences
- Similar phrases identified and grouped together
- List of words with similar meanings created from grouped phrases
- Four possible categories were identified:
 - Teaching Experience
 - Engagement
 - Practice
 - PD

QUALITATIVE RESULTS

Both treatment groups felt the PD helped them promote student engagement and described the experience as informative and helpful.

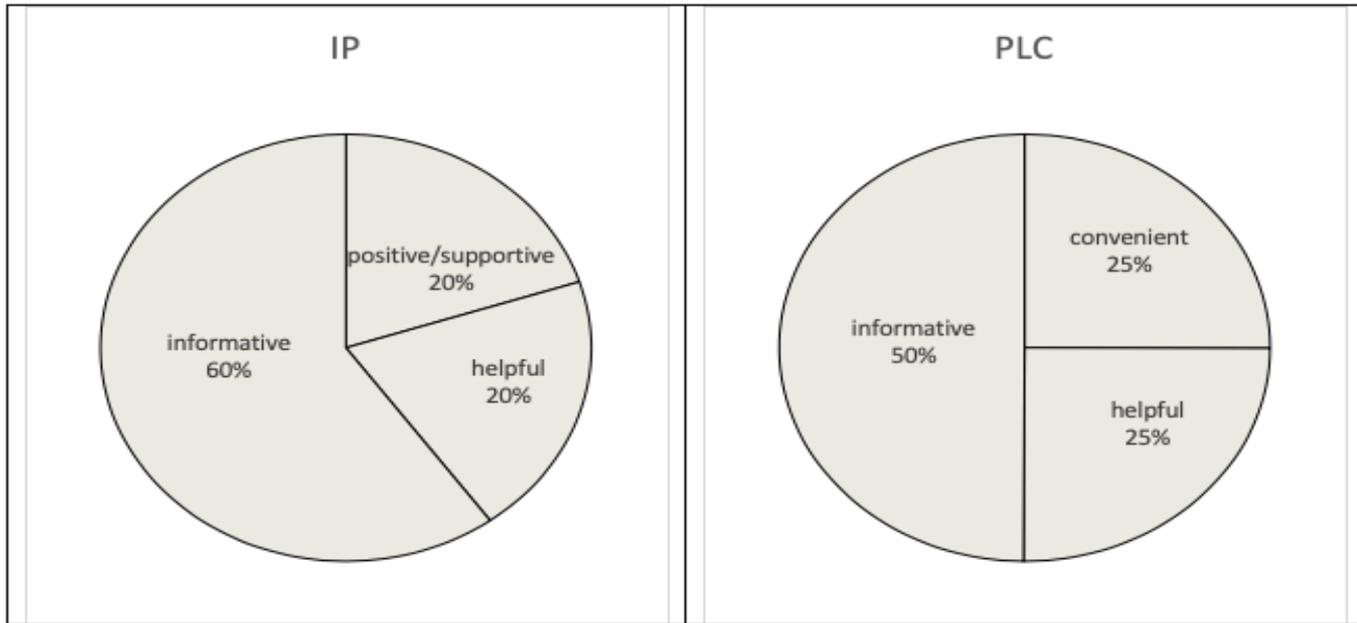


Figure 6: Comparison of frequency of professional development codes for both treatment groups.

DIFFERENCES EMERGED: ENGAGEMENT AND INSTRUCTIONAL PRACTICE.

IP

- Experiences with engagement for the IP group were associated with faculty-to-student engagement
- Focused primarily on feedback as a method of engagement

PLC

- The PLC group responses centered on engaging with other instructors or the PD experience
- Included statements indicative of strong improvements to practice

MMR RESULTS

IP

- Successful in communicating the importance of creating academic relationships as a method for increasing student engagement
- Educators became more engaged in teaching and provided more meaningful feedback
- Student scores surprisingly declined rather than increased after faculty received the IP, possibly due to increased faculty attention to providing feedback

PLC

- Focused on engagement with other faculty and the PD experience to the exclusion of faculty-to-student engagement
- Student outcomes increased after the PD and the effect was largely explained by the PD experience
- Participation cultivated improvements in practice through the sharing of new ideas and strategies

RECOMMENDATIONS

Designate resources to provide PD for online faculty

- Address faculty-to-student interactions
- PD to develop academic relationships between faculty and students
- Incorporate opportunities for collaboration with colleagues about instructional technique and practice
- Offer PD opportunities in a virtual format

Improve the educational practice of online instructors

Improve student success

Improve the quality of online education

FUTURE RESEARCH

- Larger Sample Size
- Cross section of online faculty from different college departments and different institutions
- Longitudinal study

IMPLICATIONS FOR LEADERSHIP



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QUESTIONS?

