

# Understanding The Use of Instructional Coaching to Support Cooperative Learning in the Secondary Classroom

COLLOQUIUM

OLIVET NAZARENE UNIVERSITY

DOCTOR OF EDUCATION IN ETHICAL LEADERSHIP

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# Introduction

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- ▶ Instructional Coaching
  - ▶ Work within schools
  - ▶ Help teachers achieve goals
  - ▶ Implement research-based instructional strategies
  - ▶ Partnership principles (Knight, 2007)
    - ▶ Equality
    - ▶ Choice
    - ▶ Voice
    - ▶ Dialogue
    - ▶ Reflection
    - ▶ Praxis
    - ▶ Reciprocity



# Introduction

- ▶ Cooperative Learning (Johnson & Johnson, 2003)
  - ▶ Small groups work together towards a common goal
    - ▶ Positive interdependence
    - ▶ Individual accountability
    - ▶ Group processing
    - ▶ Social skills
    - ▶ Face-to-face interaction

# Problem

- ▶ Money and time are dedicated to instructional coaching, but how are the strategies being implemented?
- ▶ ESSA compels educators to support research-based instructional strategies. Is the district in compliance?
- ▶ Are instructional coaches agents of connecting teachers to these research-based instructional strategies?



# Significance

- ▶ Kohler, Crilley, Shearer, and Good (1997)
  - ▶ Coach supported cooperative learning use
  - ▶ Only one coach
  - ▶ Cooperative learning was one of many strategies
- ▶ Penuel, Fishman, Yamaguchi, and Gallagher (2007)
  - ▶ Planning time is needed to implement research-based instructional strategies
  - ▶ Further research needed
- ▶ Minimal research has clarified the relationship between instructional coaching and the support of cooperative learning in the classroom.

# Purpose

- ▶ The purpose of the current study was to understand how Knight's (2007) seven partnership principles of instructional coaching are present in the instructional coach/teacher relationship, specifically regarding cooperative learning coaching, in order to understand the relationship between instructional coaches and teachers.



# Literature Review – Instructional Coaching

- ▶ Instructional coaching
  - ▶ Foundational studies (Showers, 1982;1984)
    - ▶ Paired teacher training with observation and feedback,
    - ▶ Increased teachers' understanding and use of strategies
    - ▶ Trained teachers in coaching methods

# Literature Review – Cooperative Learning

- ▶ Cooperative Learning
  - ▶ Foundational study (Johnson, Johnson, & Bryant, 1973)
    - ▶ Use of cooperation in the classroom increased student achievement and decreased student anxiety
  - ▶ Johnson and Johnson (2003)
    - ▶ Five essential elements of cooperative learning
    - ▶ Increased academic and social benefit



# Literature Review – Teacher Perception

- ▶ Harwood, Hansen, and Lotter (2006)
  - ▶ Study of the importance of inquiry
  - ▶ Teachers' perceptions were correlated with observed data

# Research Question #1

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*To what degree are the seven partnership principles of instructional coaching present in the coaching relationship?*



## Research Question #2

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*What relationship exists between the reported use of the partnership principles of instructional coaching and cooperative learning in the classroom?*

# Research Question #3

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*How does a teacher's use of cooperative learning differ as a factor of instructional coaching use?*



# Research Design

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- ▶ Non-experimental
  - ▶ relationships between instructional coaching and cooperative learning
  - ▶ descriptive statistics
  - ▶ Spearman and Pearson correlations
  - ▶ independent samples t-test
- ▶ Data were collected utilizing three different instruments via Google Forms
  - ▶ demographic questionnaire
  - ▶ a cooperative learning survey
    - ▶ measured participants' attitudes about cooperative learning present in their classes
  - ▶ instructional coaching
    - ▶ measured participants' attitudes about their work with instructional coaches

# Research Design - Limitations

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- ▶ The researcher was employed by the district studied
  - ▶ Instructional Coach
  - ▶ Cooperative Learning Trainer
- ▶ Participants may be non-representative of pool
- ▶ Cooperative Learning Survey was adapted for teacher responses
- ▶ Instructional Coaching Survey was designed for this study



# Data Collection

## ▶ Participants

- ▶ All teachers in the school district invited

- ▶ Voluntary

  - ▶ Approximately 400 invited to participate

  - ▶ 38 Participated

## ▶ 47 days in the fall of 2016

- ▶ Introduction letter and consent in teachers' mailboxes

- ▶ Completed forms were returned to researcher's mailbox or a sealed box within one week of distribution

## ▶ Teachers were emailed a link to a Google Form

- ▶ Instructed to complete within one week

  - ▶ Time-frame expanded to 47 days to account for late responses

# Data Collection

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- ▶ 3 Instruments
  - ▶ Questionnaire
    - ▶ Age
    - ▶ Gender
    - ▶ Teaching experience
  - ▶ The Classroom Life Instrument – Teacher Perception Survey (Cooperative Learning)
    - ▶ Adapted from a previously published survey (Johnson & Johnson, 2002)
    - ▶ Various aspects of cooperative learning were measured.
  - ▶ Instructional Coaching – Teacher Perception Survey
    - ▶ Created for the current study
    - ▶ Based on the work of Knight (2007)



# Analytical Method:

## Research Question 1

- ▶ *To what degree are the seven partnership principles of instructional coaching present in the coaching relationship?*
  - ▶ Descriptive statistics
  - ▶ Measures of central tendency were reported for all of the participants.

# Analytical Method:

## Research Question 2

- ▶ *What relationship exists between the reported use of the partnership principles of instructional coaching and cooperative learning in the classroom?*
  - ▶ Spearman correlation & Pearson product-moment Correlations
    - ▶ 5 measures of cooperative learning
    - ▶ 7 partnership principles of instructional coaching + Average Coaching Score



# Analytical Method:

## Research Question 3

- ▶ *How does a teacher's use of cooperative learning differ as a factor of instructional coaching use?*
  - ▶ Independent samples *t*-tests for cooperative learning measures
    - ▶ Compared the participants who used their instructional coach as a cooperative learning coach less than 50% of the time and more than 50% of the time
    - ▶ Compared teachers who, given more availability, would have used their instructional coach more.
    - ▶ Compared the difference between those teachers who would have used their instructional coach more if the coach had more time
      - ▶ Hochberg's corrections were applied to account for familywise errors.

# Findings & Conclusions – Question #1

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<b>Question #1</b>			
<b>Partnership Principle Perception Measures of Central Tendency</b>			
	<u>Mean</u>	<u>Median</u>	<u>Mode</u>
<b>Equality</b>	4.74	5.00	5
<b>Choice</b>	4.76	5.00	5
<b>Voice</b>	4.79	5.00	5
<b>Dialogue</b>	4.82	5.00	5
<b>Reflection</b>	4.58	5.00	5
<b>Praxis</b>	4.63	5.00	5
<b>Reciprocity</b>	4.55	5.00	5
<b>Avg. Coaching Score</b>	4.70	5.00	5.00



# Findings & Conclusions – Question #1

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- ▶ Instructional coaches were exemplifying Knight's (2007) partnership principles to a high degree.
- ▶ Ceiling effect was observed

# Findings & Conclusions – Question #2

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Question #2					
Spearman Correlation for Partnership Principles and Measures of Cooperative Learning Use					
Partnership Principles	Measures of Cooperative Learning Use				
	Student	Positive Goal		Individualistic	
	Academic	Cooperation	Inter-	Cohesion	Learning
	Support		dependence		
Equality	.22	.32*	.21	-.13	-.17
Choice	.35*	.41*	.25	.01	-.35*
Voice	.15	.19	.04	-.20	-.16
Dialogue	.15	.38*	.22	-.05	-.22
Reflection	.03	.24	.23	-.25	-.05
Praxis	.22	.35*	.34*	-.05	-.05
Reciprocity	.17	.35*	.42*	-.09	-.09
* = $p < .05$					



# Findings & Conclusions – Question #2

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## Question #2

### Pearson Correlation for Average Coaching Score and Measures of Cooperative Learning Use

	Measures of Cooperative Learning Use				
	Student Academic Support	Cooperation	Positive Goal Interdependence	Cohesion	Individualistic Learning
Average Coaching Score	.20	.30*	.27	-.12	-.14

\* =  $p < .1$

# Findings & Conclusions – Question #2

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- ▶ Choice is correlated with multiple facets of cooperative learning
- ▶ Cooperation is correlated with many partnership principles
- ▶ Praxis and positive interdependence are correlated



# Findings & Conclusions – Question #3

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## Question #3

***t*-test Results of Measuring Cooperative Learning Use for High and Low Usage of an Instructional Coach for Cooperative Learning**

Measures of Cooperative Learning	Low Usage		High Usage		<i>t</i> -Test
	M	SD	M	SD	
Student Academic Support	3.60	.58	3.93	.62	-1.50
Cooperation	4.07	.41	4.35	.47	-1.80
Positive Goal Interdependence	3.13	.66	3.42	.77	-1.12
Cohesion	3.5	.57	3.66	.59	-.66
Individualistic Learning	2.63	.60	2.33	.24	1.23

***Note.*** Low Usage is below 50% of coaching time; high usage is 50% coaching time and above

# Findings & Conclusions – Question #3

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## Question #3

*t*-test Results for Measures of Cooperative Learning Use Compared to If Teacher Had More Availability

Measures of Cooperative Learning	Would Not Use Coach		Would Use Coach		<i>t</i> -Test
	M	SD	M	SD	
Student Academic Support	3.27	.61	3.85	.52	-2.97*
Cooperation	3.89	.50	4.24	.38	-2.34*
Positive Goal Interdependence	2.91	.52	3.33	.73	-1.73**
Cohesion	3.40	.66	3.62	.53	-1.10
Individualistic Learning	2.77	.74	2.46	.60	1.336

\* =  $p < .05$ . \*\* =  $p < .1$



# Findings & Conclusions – Question #3

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## Question #3

### Hochberg Correction for *t*-test Results for Measures of Cooperative Learning

#### Use Compared to If Teacher Had More Availability

Measures of Cooperative Learning	Unadjusted <i>p</i> value	Hochberg Threshold	Hochberg Correction
Student Academic Support	.005	.01	Significant
Cooperation	.025	.0125	
Positive Goal Interdependence	.058	.017	
Individualistic Learning	.190	.025	
Cohesion	.280	.05	

*Note.* The blank areas indicate values that were not statistically significant.

# Findings & Conclusions – Question #3

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Question #3					
<i>t</i> -test Results for Measures of Cooperative Learning Use Compared to If Instructional Coach Had More Availability					
Measures of Cooperative Learning	Would Not Use Coach		Would Use Coach		<i>t</i> -Test
	M	SD	M	SD	
Student Academic Support	3.610	.64	3.76	.57	-.77
Cooperation	4.18	.54	4.09	.30	.64
Positive Goal Interdependence	3.14	.74	3.28	.65	.55
Cohesion	3.51	.63	3.61	.50	-.54
Individualistic Learning	2.44	.68	2.68	.61	-1.14



# Findings & Conclusions – Question #3

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- ▶ Teachers who felt limited in their own time to meet with a coach had students who cared about the academic success of each other.

# Conclusions - General

- ▶ Coaching program was perceived to be strong
  - ▶ Knight (2007) model of instructional coaching can be implemented with a large number of teachers
- ▶ Choice appeared to be important in the coaching relationship
  - ▶ Most statistically significant correlations with cooperative learning
- ▶ Instructional coaches
  - ▶ Praxis is important for credibility
- ▶ Teachers require more time to work with coaches



# Implications

- ▶ The Knight (2007) model of instructional coaching can be implemented with fidelity in other districts.
- ▶ Teachers should be given choice over what they are coached on and how they are coached.
- ▶ Instructional coaches should maintain presence in the classroom for praxis.
- ▶ Teachers feel limited in their time to work with coaches, but are using cooperative learning.

# Implications

- ▶ School administrators should provide more/flexible time for teachers and coaches to work together.
- ▶ Choice was the most important of the partnership principles and should be preserved.



# Recommendations

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- ▶ Further research should be conducted in the following areas:
  - ▶ More nuanced study of the coaching relationship is needed.
  - ▶ More study of the different models of instructional coaching and cooperative learning are needed.
  - ▶ Further investigation of the Knight (2007) model as a support for other research-based instructional strategies is needed.

# Recommendations

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- ▶ Further research should be conducted on the following areas:
  - ▶ A deeper understanding of what aspect of “Choice” led to more cooperative learning is needed.
  - ▶ It is unclear as to what degree an instructional coach’s familiarity with cooperative learning impacts the teacher’s use of cooperative learning.



# References

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