ICPEL
International Journal of Educational Leadership Preparation

Spring 2023
Volume 18, Number 1
ISSN 2155-9635

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ICPEL's Education Leadership Review is an internationally refereed journal published annually in the Fall by the International Council of Professors of Educational Leadership. The manuscripts in Volume 17, Number 1 (Spring 2022) have been peer-reviewed, accepted, and endorsed by the International Council of Professors of Educational Leadership as significant contributions to the scholarship and practice of school administration and PK-12 education.

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The Relationships between Gender and Graduation Rates, Dissertation Methodology, GPA, and GRE Scores for Ed.D. Graduates at a Southeastern University

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This quantitative study of one doctoral department at a regional, state-supported university located in the Southeastern United States used descriptive, parametric, and non-parametric methods to determine the relationships between gender and each of the academic or graduation factors. Graduation rates were analyzed for doctoral students admitted from 2004 to 2019. Alumni data from 2004 to 2013 were analyzed for the other variables in the study to examine the transition from face-to-face to online instruction. Five hundred thirty educational leadership Ed.D. alumni were included in the study. Chi-square analyses, using crosstabs and independent samples t tests, were used to determine relationships between the test variables and gender. There were no significant differences between graduation rates, GRE scores, type of dissertation completed, area of concentration, GPAs, number of dissertation hours, or dissertation semesters to completion between female and male doctoral students for any of the variables. Female and male doctoral graduates displayed remarkably similar values on all the variables in the study. Implications for this study include graduate programs providing online options for students to increase students' access and program flexibility, actively recruiting male students to increase diversity in the programs that have low male enrollment, considering alternative admission criteria such as work and leadership experience, and striving for parity in exposure to male and female professors.

Keywords: Gender and graduate students; gender and GRE; doctoral program persistence; doctoral program completion; gender and dissertation methodology

Gender stereotypes consist of social roles encompassing various behaviors and attitudes generally considered acceptable, appropriate, or desirable for a person based on that person's biological or perceived sex. Issues arise due to gender being a limiting factor because of how particular genders are viewed and the expected responsibilities based on societal norms. Though this stereotyping can be observed in many facets of life, it is especially prominent in academic settings. These stereotypes can include strengths in a subject, expected education levels, or a general level of achievement or intelligence, for example. These views are limiting to individuals due to their implications of what one's strengths should be compared to what they actually are. The purpose of this non-experimental, quantitative study was to examine the relationships between gender and graduation rates, dissertation methodologies, GPAs, and GRE scores of Ed.D. graduates at a Southeastern University.

There are gender differences in graduation rates at all points along the high school to college to graduate school pipeline (National Center for Education Statistics, 2021). According to the National Center for Educational Statistics (NCES) report on the adjusted cohort graduation rate (ACGR), tracking on-time graduation, states' graduation rate for the 2018-2019 year ranged from 69 to 92%, with a national mean of approximately 86% (Irving et al., 2022). In 2020, the estimated dropout rate was higher for male students (6.2%) than for female students (4.4%).

Among recent high school graduates ages 16 to 24, nearly 15% more females than males matriculate into post-secondary institutions (Bureau of Labor Statistics, 2022). According to estimates, women received approximately 57.5% of the bachelor's degrees awarded in the U.S. Graduate schools exhibited the same trend (American Council on Education, 2016). The most recent national data reports that females received approximately 61.4% of the master's degrees and over half of the doctoral degrees (55.2%). Table 1 displays the four degree areas as of the 2019-20 school year (NCES, 2021).

Table 1

U.S. Graduates of Associate's, Bachelor's, Master's, and Doctoral Programs in 2019-20

	Females	% of Total	Males	% of Total	Total
Associate's Degree	625,154	61.4	393,079	38.6	1,018,233
Bachelor's Degree	1,177,168	57.7	861,263	42.3	2,038,431
Master's Degree	517,785	61.4	325,664	38.6	843,449
Doctoral Degree	104,953	55.2	85,225	44.8	190,178

Note. Source: NCES, 2021

Over the past 40 years, females have matched or outpaced males at every postsecondary level. Nationally, females have earned at least half of all associate's, bachelor's, and master's degrees since the 1981-82 school year (NCES, 2021). As of 2005, females have also earned at least half of all doctoral degrees. As of the first quarter of 2019, 29.5 million women in the labor force had at least a bachelor's degree, effectively matching the number of college-educated men (29.3 million) in the workforce (Pew Research, 2019). Doctorates earned in selected fields of

study for the 2018-19 school year and the percent of females and males in each field are presented in Table 2.

Table 2
Survey of Earned Doctorates in the U.S.: Percent of Females in 2018

Subfield of study	Total	Male	Female	% Female
All Fields	55,195	29,798	25,368	46.0
Life Sciences	12,780	5,659	7,114	55.7
Physical Sciences and Earth Sciences	6,335	4,214	2,118	33.4
Mathematics and Computer Sciences	4,030	3,043	983	24.4
Psychology and Social Sciences	8,899	3,641	5,256	59.1
Engineering	10,183	7,726	2,453	24.1
Education	4,834	1,496	3,337	69.0
Humanities and Arts	5,145	2,567	2,575	50.0
Business Management and Administration	1,481	869	609	41.1

Note. Source: National Center for Science and Engineering Statistics, Survey of Earned Doctorates

Literature Review

Likely the most studied construct in graduate admissions (Woo et al., 2023), the GRE's predictive validity on doctoral students' performance and degree completion has yielded studies that present varying results. In a meta-analysis of 100 studies, including 10,000 students, on the GRE's use to predict graduate students' academic performance, Kuncel et al. (2010) Few studies have focused on the predictive validity of GRE scores in doctoral programs across disciplines. For example, Lightfoot and Doerner (2008) studied 70 doctoral criminology and criminal justice students from 1991 to 2000, finding that the students with lower GRE scores tended to take longer to graduate. Interestingly, students in this program with lower GRE scores were likelier to complete the program than those with higher scores. Despite low scores, these students are still motivated to accomplish their goals. Stock et al. (2011) found that economics doctoral students' quantitative GRE scores were related to degree completion. Like Lightfoot and Doerner (2008), Stock et al. found that GRE scores better predict whether a degree would be completed rather than accurately gauging the time to completion. This finding further suggests that graduate students often possess the appropriate motivation to earn degrees, although their times to completion vary. Malone et al. (2004) studied 168 education doctoral students, finding that the GRE predicted student success. Their analysis demonstrated that students who completed the program had higher program GPAs and overall GRE scores. However, those who did not persist

in the program had higher undergraduate GPAs and quantitative GRE scores than those who did persist and complete the program. Rockinson-Szapkiw et al.'s (2014) study of an online education doctoral program found that students' methodology choice and GRE writing scores were the strongest predictors of time to completion. These factors illustrated the students' ability to develop a dissertation project, which requires significant writing ability and persistence. Further, the research on the GRE's predictive validity suggests that graduate student applicants are a self-selected group of individuals who tend to perform well academically.

However, not all studies suggest a correlation between GRE success and subsequent success in graduate programs. In the communication field, GRE scores were not related to success factors. Feeley et al. (2005) studied 48 communication doctoral students between 1990 to 2000, finding that their verbal GRE scores were not significantly related to GPA, and overall GRE scores did not relate to degree completion. Katz et al. (2009) examined a doctoral nursing program, finding no significant correlation between GRE scores and students' GPAs. Due to the GRE being a standardized test covering multiple topics, it differs significantly from students' success in their area of study reflected by their GPAs.

Researchers have also studied gender's role in graduate students' success, persistence, and completion. Researchers found a gap between men's and women's performances on the quantitative section of the GRE (Bleske-Rechek & Browne, 2014; Herzog, 2011). According to Educational Testing Service (2022) data from GRE test takers from July 2020 to June 2021, men's mean Verbal Reasoning and Quantitative Reasoning scores were higher than women's, and women's mean Analytical Writing score was slightly higher than men's mean score. Tock and Anders Ericsson (2019) hypothesized that the gender differences in quantitative and verbal GRE scores are partly due to curricular choices related to gender bias. In other words, men tend to have curricular emphases in mathematics, and women tend to have curricular emphases in verbal disciplines.

The reasons for these curricular emphases could be related to stereotype threat rather than any inherent preference for one discipline over the other. Steele and Aronson (1995) developed the theory of stereotype threat—that the threat of a stereotype would have effects, sometimes adverse, on the individual. Steele and Aronson found that

> making African American participants vulnerable to judgment by negative stereotypes about their group's intellectual ability depressed their standardized test performance relative to White participants, while conditions designed to alleviate this threat, improved their performance, equating the two groups once their differences in SATs were controlled. (p. 808)

Spencer et al. (1999) were the first to study gender stereotype threats' effects on women's mathematics performance. They conducted studies at elite American colleges and universities, selected participants who were good at mathematics, and consistently found that women scored lower when they were told that there were gender differences on the tests. When researchers told women study participants that the tests did not produce gender differences, the women's performances improved. Stereotype threat theory is an accepted theory and demonstrates that unsupported assumptions of individuals can hinder or aid their academic performance. Researchers have tested the effects of stereotypes on women's performance on standardized tests, finding that stereotypes particularly impaired women's performance on mathematics tests (Picho et al., 2013; Pronin et al., 2004; Shapiro & Williams, 2012; Tsui et al., 2016). Mathematics

is a common subject in which gender stereotypes are prominent. Often this is enforced through peers' and instructors' comments or the male-dominated student and faculty populations in many mathematics courses.

Although stereotype threat has been established as influencing women in their academic pursuits, the impact of gender on doctoral program completion is negligible (Seagram et al., 1998; Spronken-Smith et al., 2018). Nevertheless, other studies suggest that gender influences outcomes for female graduate students. For example, studies have shown significantly higher publication output among male graduate students (Feldon et al., 2017; Pezzoni et al., 2016). Similarly, Seagram et al. (1998) found higher satisfaction and more collaborative research with faculty among men than women. Women tend to perform better in graduate programs with significant numbers of female professors. For example, Main (2018) explained that female doctoral students are more likely to complete degrees at institutions with higher proportions of female faculty. This phenomenon, explained by Kanter's theory of proportions, suggests that having a gender balance in faculty composition could address disparities in doctoral program completion (Main, 2018).

There is evidence for higher engagement in qualitative research for women than men. After assessing several journals, Plowman and Smith (2011) found an over-representation of women and an under-representation of men as authors of qualitative studies. Information processing theory has been used to explain this trend, implying that females possess inherent informational processing skills or are socialized to have such skills, making them better qualitative researchers. This is not meant to imply a lack of ability in quantitative research in a population; instead, there was limited exposure to this approach as they progressed through their education. The social identity perspective also supposes that women are likely to engage in quantitative research because they have mentors who guide them to engage in qualitative methods. The third explanation of this phenomenon lies in the "separate versus connected knowing," supposing that women are more likely to lean towards connected knowing. Connected knowing focuses on sensitivity to other people and emotions, while separate knowing focuses on objectivity without including one's emotions (Plowman & Smith, 2011).

With the online component now being an integral part of higher education and online programs being in more demand now than they have been before (Black et al., 2019; Fuller et al., 2014; Morris et al., 2020; Xu & Xu, 2019), researchers have begun to research the role of gender in graduate student success and persistence. For example, Cross (2014) found that women who were online graduate students tended to be more "gritty," defined as "passion and persistence for long-term goals" (p. 1), and the higher levels of grit in women correlated with higher GPAs in their graduate programs (Aswini & Deb, 2017; Cross, 2014). Researchers have studied motherhood's effect on women's attrition and time-to-completion rates, finding that childrearing duties often influence women's decisions to remain in graduate programs and abilities to complete their programs in a timely fashion (Kulp, 2016; Lynch, 2008; Palermo-Kielb, 2020; Theisen et al., 2018). However, the research on gender and persistence is not consistent. Studies have found that there are no statistically significant differences in persistence between men and women in online graduate programs (Muljana & Luo, 2019; Rotar, 2022; Yukselturk & Top, 2013), while other researchers found higher attrition rates for women than men in online graduate programs (Waugh & Searle, 2014; Yasmin, 2013).

The overall estimated dropout rate for doctoral students is 50% or greater (Bowen & Rudenstine, 1992; Castelló et al., 2017; Litalien & Guay, 2015; Wollast et al., 2018). While there is no nationwide data on attrition in online doctoral programs specifically, some researchers have estimated that attrition is much higher, up to 20% higher, for these programs than the typically cited 50% attrition rate for doctoral programs overall (Angelino et al., 2007; Bawa, 2016; Ivankova & Stick, 2007). Doctoral students reported that relationships and interactions with faculty members presented the most significant challenges, often leading to attrition (Cusworth, 2001; Columbaro, 2009; Hoskins & Goldberg, 2005; Roumell & Bollinger, 2017). Online doctoral education presents additional challenges such as isolation (Ames, 2018; Yuan & Kim, 2014), lack of support (Devos et al., 2017; Erichsen et al., 2014; Kennedy & Gray, 2016), and difficulty with technology (Angelino et al., 2007; Lee et al., 2022; Lim et al., 2019; Patterson & McFadden, 2009).

Research Questions

This study was guided by the following research questions: (1) Is there a significant relationship between Ed.D. leadership students' graduation rates and gender? (2) Is there a significant relationship between Ed.D. leadership students' dissertation methodology and gender? (3) Is there a significant relationship between Ed.D. leadership students' program concentration and gender? (4) Is there a significant relationship between Ed.D. leadership students' GRE scores and gender? (5) Is there a significant relationship between Ed.D. leadership students' GPA and gender? (6) Is there a significant relationship between Ed.D. leadership students' number of dissertation hours and gender? (7) Is there a significant relationship between Ed.D. leadership students' number of semesters in dissertation hours to completion and gender? (8) How did the transition to an online program affect students' completion?

Methodology

The purpose of this quantitative case study of one doctoral educational leadership department at a regional, state-supported university was to use descriptive, parametric, and non-parametric methods to determine the relationship of several academic and graduation factors to gender. Graduation rates were analyzed for doctoral students admitted from 2004 to 2019. Alumni data from 2004 to 2013 were analyzed for the other variables in the study to examine the transition from face-to-face to online instruction. Five hundred thirty educational leadership Ed.D. alumni were included in the study. Chi-square analyses, using crosstabs, and t tests, were used to determine relationships between the test variables and gender. We used IBM SPSS Version 28 to conduct our analyses of a de-identified dataset from the university's alumni database.

The target department has been awarding Ed.D. degrees since 1972. During the program's first two years, the graduates were 100% male. The first female doctoral student graduated from the department in 1974. Male graduates continued to outnumber female graduates throughout the 1970s. By the close of the 1970s, females were approaching equality in the number of graduates (1979 graduates = 42% female). However, in 1980 female graduates out-numbered male graduates for the first time. In the following 39 years (1980-2019), female graduates have outnumbered male graduates each year. From 2004 to 2019, females comprised

65.7% of the Ed.D. graduates, and for the most recent 3-year period (2017-2019), the percentage of female graduates has been 55%, 63%, and 67%, respectively (see Table 3).

We recognize that this study has limitations and delimitations. First, we categorize gender into only two constructs—male or female. Participants in this study self-identified as either male or female on applications. Participant self-identification and social constructions of the gender binary are the reasons for the binary indications of gender in this study. We recognize that future studies may include people of diverse genders. Second, participants were selected from previous date ranges to include students who had completed, dropped out, or were currently enrolled. The date range of 2004-2013 was used to examine the period during which the program transitioned to a completely online program. Last, this study represents a case study of one doctoral educational leadership program in the Southeastern United States and may not be generalizable to other institution's programs.

Table 3

Ed.D. Degrees Awarded (2004-2019): Percent of Total by Gender

Ed.D. Graduates	N	Percent of Total
Female Graduates	348	65.7%
Male Graduates	182	34.3%
Total	530	100.0%

Findings

The first three analyses were conducted using a two-way contingency table analysis using crosstabs. We evaluated whether a statistical relationship existed between two nominal-level variables in each case.

For Research Question 1, a two-way contingency table analysis was conducted to evaluate the relationship between gender and graduation for Ed.D. alumni. The two variables were graduation with two levels (yes or no) and gender with two levels (male or female). Graduation and gender were found not to be significantly related, Pearson $\chi 2(1, N = 486) = .33$, $p = .567$. Cramer's $V = .03$. The analysis indicated no relationship between graduation and gender. However, female doctoral students graduated at a slightly higher rate than their male counterparts (see Table 4).

Table 4

Female-Male Representation in the Ed.D. Program (2004-2013)

Admitted Total [a]	Females (%)	Males (%)	Graduated Total	Females (%)	Males (%)	Withdrew Total	Female (%)	Males (%)
487	323 (66.3)	164 (33.7)	329	221 (67.2)	108 (32.8)	158	102 (64.6)	56 (35.4)

[a] 10 Students that are still active were included in the total

The overall graduation rate for the Ed.D. program in Educational Leadership at the participating university was 67.6% during this period (2004-13). The graduation rate for females was 68.4%, and the graduation rate for males was 65.9%. The national graduation rate is about 50.0% for all doctoral programs (NCES, 2019).

For Research Question 2, a two-way contingency table analysis was conducted to evaluate the relationship between gender and type of dissertation for Ed.D. alumni. The two variables were gender with two levels (male and female) and type of dissertation with two levels (quantitative or qualitative). Gender and type of dissertation were found not to be significantly related, Pearson $\chi 2$ (1, N = 94) = .04, p = .847. Cramer's V = .07. The analysis indicated that there was not a significant relationship between gender and type of dissertation. The number and types of dissertation by gender are displayed in Table 5.

Table 5

Dissertation Type by Gender (2017-2019)

	Female	Male	All Graduates
Type of Dissertation	N (%)	N (%)	N (%)
Quantitative	43 (75.4)	28 (73.7)	71 (67.2)
Qualitative	14 (24.6)	10 (26.3)	24 (26.4)
Totals	57 (100.0)	38 (100.0)	95 (100.0)

For Research Question 3, a two-way contingency table analysis was conducted to evaluate the relationship between gender and areas of concentration for Ed.D. alumni. The two variables were gender with two levels (male and female) and areas of concentration with three levels (Higher Education Leadership, School Leadership, or Administrative Endorsement). Gender and areas of concentration were not found to be significantly related, Pearson $\chi 2$ (2, N = 137) = 6.63, p = .085. Cramer's V = .22. The analysis indicated no relationship between gender and areas of concentration. Because the overall analysis was not significant (p = .085) no follow up was conducted. The totals are presented in Table 6.

Table 6

Ed.D. Concentration by Gender (Current Students)

	Female N (% within Concentration)	Male N (% within Concentration)	Total N

Higher Education Leadership	73 (66.4)	37 (33.6)	110
School Leadership	38 (67.9)	18 (32.1)	56
Administrative Endorsement	27 (77.1)	8 (22.9)	35
Overall	138 (68.7)	63 (31.3)	201

We analyzed the data using independent samples t tests for Research Questions 4 - 7. For Research Question 4, we compared GRE scores (verbal, quantitative, and analytical writing) between current female and male and recently graduated female and male doctoral students, and there were no significant differences in verbal scores (p = .587), quantitative scores (p = .729) or analytical writing scores (p = .056) for students that graduated in the previous three years and similar results, no statistical differences, for currents students in verbal scores (p = .249), quantitative scores (p = .241), and analytical writing (p = .181) scores. Female and male Ed.D. students, both current and recently graduated, had very similar scores on all three sections of the GRE.

For Research Question 5, we compared final doctoral program GPA to gender. The analysis revealed no significant difference in final GPA between male and female doctoral students (p = (.051). However, females did have a slightly higher GPA (3.92) than males (3.87). For Research Question 6 and 7, the analyses displayed no significant difference in number of hours in dissertation (p = .666), and number of semesters in dissertation hours (p = .925). Females registered for 17.1 hours of dissertation work and males for 17.8 and females registered for 4.1 semesters of dissertation work and males 4.2 semesters.

Table 7

GPAs, Dissertation Hours, and Dissertation Semesters by Gender

Variable	Gender	N	M	SD
GPA	Male	35	3.868	.14
	Female	52	3.921	.16
Dissertation	Male	35	17.80	7.37
Hours	Female	52	17.10	7.48
Dissertation	Male	35	4.17	2.33
Semesters	Female	52	4.12	2.94

For Research Question 8, we evaluated graduation rates by gender for three-year periods, during the years that the department transitioned from 100% face-to-face (F2F) to 100% online. From 2001 to 2003 all Ed.D. classes were taught F2F and the graduation rate was about 67% for females and 59% for males. In 2007 to 2009 the program was taught with a mixture of online and

F2F classes. The graduation rates for females and males was 68% and 70% respectively. For the period from 2011 to 2013 the graduation rate was over 70% for females and over 71% for males. Online instruction seems to have benefited female Ed.D. students substantially but remarkably so for male students (59% to 71%). See Table 8 for a complete list.

Table 8

Graduation Rates by Gender During Program Transition

2001-03 F2F Delivery	2007-09 Mixed Delivery	2011-13 Online Delivery
All Students	All Students	All Students
73/114	116/169	107/150
64.0%	68.7%	71.3%
Females	Females	Females
50/75	77/113	69/98
66.7%	68.1%	70.4%
Males	Males	Males
23/39	39/56	38/52
59.0%	69.6%	73.1%

Discussion

As a result of this study, the following conclusions were drawn. From 2004 to 2019, the ratio of females to males admitted to the program was 323/164 (66.3% female). During the same period, the ratio of female to male graduates from the program was 221/108 (67.2% female). The percentage of applicants admitted to the Ed.D. program was identical for males and females (93.0%). Therefore, the large difference in the proportion of females to males graduating from the Ed.D. program was because fewer males were applying for admission.

There was no significant difference ($p = .567$) in the study's graduation rate between male and female Ed.D. graduates, which aligns with some literature on gender and its influences on doctoral program graduation (Seagram et al., 1998; Spronken-Smith et al., 2018). Additionally, no significant relationship ($p = .085$) was found when areas of concentration (Higher Education Leadership, School Leadership, and Administrative Endorsement) were compared to gender. Doctoral students were graduating from the different concentrations at similar rates for females and males.

In addition, there was no significant relationship ($p = .847$) between dissertation methodology (quantitative or qualitative) and the gender of Ed.D. graduates. Females (75%) were slightly more likely than males (74%) to complete quantitative dissertations. However, males (26%) were slightly more likely than females to complete qualitative dissertations (25%). This finding does not align with previous research that suggested that women tend to engage in qualitative research, and men tend to engage in quantitative research (Plowman & Smith, 2011). However, it does align with Rockinson-Szapkiw's (2014) findings that there was no significant difference between GRE scores and dissertation methodology choice.

The independent sample t tests revealed that there were no significant differences in verbal scores ($p = .587$), quantitative scores ($p = .729$), or analytical writing scores ($p = .056$)

between students who graduated in the previous three years and current students. Similarly, there were no statistically significant differences in verbal scores ($p = .249$), quantitative scores ($p = .241$), or analytical writing scores ($p = .181$) between the two groups. Females displayed only slightly higher mean scores for verbal (+.78 point), quantitative (+.34 point), and analytical writing (+.34 point) than males. This finding does not align with recent Educational Testing Service (2022) data, finding that males have slightly higher mean scores on quantitative and qualitative sections of the GRE. This study's male and female students had nearly equivalent mean GRE scores. This program does not have GRE cut-off scores for acceptance, so this phenomenon cannot simplistically be attributed to a cut-off score.

Three academic variables (GPA, dissertation hours, and dissertation semesters) were analyzed to determine if there were differences between female and male doctoral graduates. No significant difference ($p = .857$) was found between females and males for any of the analyses. In fact, female (3.843) and male (3.873) graduates displayed very similar GPAs, similar numbers of dissertation hours (females = 20.65 semester hours and male graduates = 20.00 semester hours), and slightly variable numbers of dissertation semesters (females = 5.06 semesters and males = 4.15 semesters).

During the transition from a F2F to online delivery in the Ed.D. program, it was interesting to note that female students' graduation rate increased slightly from 67% in 2001-2003 to 68% in 2007-2009 and to 70% in 2011-2013. At the same time, the graduation rate for males increased remarkably from 59% (2001-2003) to 70% (2007-2009) and 71% (2011-2013). For the doctoral students admitted from 2004 to 2013, 67.6% of all students graduated within a seven-year enrollment window. However, there was a slight difference between the graduation rate of females (68.4%) and males (65.1%). These results suggest a successful migration from F2F instruction to online instruction, with faculty providing appropriate online instruction, enabling students to complete dissertation projects effectively and efficiently.

Implications for Further Research and Practice

This study provides an example of gender parity related to several student success variables. These results contrast previous research that suggested that women tend to choose qualitative methods and men tend to choose quantitative methods, as well as research that suggested that men have higher GRE scores than women. Further research could seek to understand better the reasons for this program's gender equality in terms of persistence, success, and completion rates, as well as for higher male graduation rates after the transition to online delivery and reasons. Qualitative approaches, such as focus groups, could shed light on these issues and provide implications for practice for other doctoral programs seeking gender parity in student persistence and completion rates. Further research should explore why fewer males are applying to the Ed.D. program. Identifying any barriers or challenges preventing male students from pursuing doctoral education is essential. The finding that females were slightly more likely to complete quantitative dissertations and males were slightly more likely to complete qualitative dissertations highlights the need for further research into dissertation methodology preferences and factors that influence these preferences.

This study's results suggest many important implications for graduate educational leadership programs. Success and completion rates increased when the program transitioned to

online delivery. Although some research has indicated that online graduate program delivery is associated with lower student success rates than face-to-face delivery (Angelino et al., 2007; Bawa, 2016; Ivankova & Stick, 2007), the opposite was true in this case. Online cohorts in this study performed better and completed degrees at a higher rate than face-to-face cohorts did, suggesting that online doctoral program delivery has the potential to assist graduate students succeed and persist. Male student completion increased sharply when the program transitioned to the online format--from 59% (2001-2003) to 71% (2011-2013). Possible reasons for this are increased access to materials and faculty members, as well as course and assignment flexibility, which align with adult and working students' needs. The successful transition from face-to-face to online instruction suggests that online delivery can be an effective way to deliver doctoral education and can offer a supportive environment to all students. Institutions offering Ed.D. programs may consider offering online options to attract students who may not be able to attend on-campus programs. Additionally, institutions should provide appropriate support and resources to ensure that students can complete their dissertation projects effectively and efficiently in an online environment.

Further practical implications for institutions offering Ed.D. programs include actively recruiting male students to increase diversity in the programs that have low male enrollment. This may involve outreach efforts to undergraduate and master's degree programs and offering targeted support for students during the application process. Consistent and careful faculty mentoring can also assist programs in retraining students, particularly male students (Bukko et al., 2019).

The finding that there were no significant differences in GRE scores between male and female graduates suggests that the GRE is an effective measure for graduate admissions. However, admission decisions should not be based solely on GRE scores. Institutions may want to consider alternative measures of potential success, such as past academic performance and work and leadership experience.

Further, the finding that there was no significant difference in graduation rates between male and female graduates suggests that gender is not a significant factor in doctoral program completion at this site. During the last 20 years, this program's faculty composition was approximately 50% male and 50% female. Exposure to male and female professors may benefit students and reduce stereotype threat, leading to gender parity regarding student methodology selection, persistence, success, and completion.

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Debriefing Mixed Reality Simulations in an Educational Leadership Preparation Program: An Exploratory Case Study

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Debriefing may be the most important factor for learning in simulations. This exploratory case study investigated a modified Plus-Delta approach to debriefings following mixed reality simulation-based learning. The findings suggested that educational leadership students who encountered debriefings from simulations developed leadership skills and dispositions and perceived that those acquired skills and dispositions would transfer to leadership positions currently or in the future. Implications and recommendations are provided.

Keywords: mixed reality simulations, leadership preparation

Aspiring educational leaders need to be able to analyze complex situations, make effective decisions, and transfer and apply theoretical knowledge to practice (Gilbert, 2017). Learning to transfer theoretical knowledge into professional contexts as an educational leader is a central outcome of simulation-based learning that is grounded in situated and experiential learning for realistic and authentic learning (Boet et al., 2014; Cobb & Bowers, 1999; Lave & Wegner, 1991). However, to develop leadership abilities that can transfer to real-world settings, aspiring educational leaders need opportunities to practice these skills.

Mixed reality simulations, which combine both real and virtual worlds, may hold promise for teaching students how to develop leadership skills, including how to conduct conferences with a hostile parent or with a teacher who requires instructional coaching (Piro & O'Callaghan, 2020, 2021). In fact, simulations and the subsequent debriefings may help students to overcome their stress and anxiety as they develop new leadership practices, enhancing the learning process (Tremblay, et al, 2016), and having the potential to transfer that knowledge.

While mixed reality simulation usage and research is developing within educational leadership programs (for example, see Piro & O'Callaghan, 2020, 2021; Buckridge, 2016; Ceballos et al, 2020; Gilbert, 2017a), the debriefing element of the simulation experience has been under-researched. This current study is relevant because it aims to provide an exploratory look into the debriefing process of simulation-based learning in educational leadership preparation. The purpose of this study was to gain insight into the simulation debriefing process by exploring how participants in an educational leadership graduate program perceived the value of clinical supervisor debriefings for learning skills and dispositions following mixed reality simulations in an educational leadership preparation program.

Mixed Reality Simulation-Based Learning

Simulations in the educational field provide opportunities for situated learning (Falconer, 2013; Utley, 2006) and learning through experience (Fanning & Gaba, 2007; Kolb, 1984). The purpose of simulations is to challenge the student to engage, make decisions and communicate as an actual professional (Dotger, 2015). A simulation can include any experience whereby a participant is immersed in a life-like environment (Dieker, Kennedy et al., 2014). Simulation-based learning seeks to "replace or amplify real experience with guided experiences" (Gaba, 2004, p. 12).

Teaching simulations originated in case studies that were read and then role-played in educator preparation programs (Dieker, et al., 2014). Recently, as technology has evolved, several virtual platforms for simulations have emerged in educator preparation, including SimSchools and Mursion, previously called TeachLivE (Dieker, et al, 2014). Both are mixed reality learning environments where real students interact with varying virtual avatars, whose roles depend on the goals of the simulation. Mixed reality simulations encompass both virtual and real environments, spanning the reality-virtuality continuum (Milgram & Colquhoun, 2014; Milgram & Kishino, 1994; Milgram et al., 1994). Therefore, mixed reality simulations are a combination of both virtual and real environments, imitating real-life scenarios (Milgram & Kishino, 1994; Milgram et al., 1994). This blending of the virtual and physical is encompassed by the term *mixed reality simulation*. Real students interact with virtual avatars and can train and re-train skills and

dispositions until they reach mastery (Bradley & Kendall, 2014; Dieker, Kennedy, et al., 2014; Dieker, Rodriguez, et al., 2014; Ludlow, 2015).

These mixed reality simulations are conducted through online scenarios via Zoom with specific targeted outcomes. They feature avatars known as virtual puppets, which are navigated by a human simulation specialist to engage a student interacting with the virtual environment from a computer (Bradley & Kendall, 2014; Dieker, Kennedy, et al., 2014). Avatars in virtual simulations are '…perceptible digital [representations] whose behaviors reflect those executed, typically in real time, by a specific human being' (Nagendran, Pillat, Kavanaugh, Welch, & Hughes, 2014, p. 110). In educational leadership scenarios, avatars can represent various stakeholders, including parents or teachers. A simulation specialist controls the digital puppetry system in conjunction with basic artificial intelligence (Chini et al., 2016; Dede, 2009; Dieker, Straub, et al., 2014; Nagendran et al., 2013; 2014). The simulation specialist speaks through the avatar directly with educational leadership students offering real time conversational exchanges (Nagendran et al., 2013, 2014). The more life-like the simulation environment is, "the greater the participant's suspension of disbelief that she or he is 'inside' a digitally enhanced setting" (Dede, 2009, p. 66). Mixed reality simulations provide a platform for educator preparation programs to engage with situated and experiential learning to achieve professional outcomes and skills (Piro & O'Callaghan, 2020; Bautista & Boon, 2015; Storey & Cox, 2015) and to develop a new identity as a school leader (Piro & O'Callaghan, 2020, 2021; Gilbert, 2017b).

Simulation-learning typically consists of three steps: 1) briefing, where the scenario and expectations are described to students; 2) simulation, where the scenario is performed; and 3) debriefing, where the simulation performance is addressed, often through pre-existing standards or guidelines (Cant & Cooper, 2011; Kriz, 2010). A community of practice (Lave & Wegner, 1991) may develop when simulations are performed with peers and a supervisor, who can observe the performance and then provide feedback through debriefings, helping students to identity and reach core professional skills.

Debriefings and the Reflective Process

Hattie and Timperley (2007) defined feedback as "information provided by an agent (e.g., teacher, peer, book, parent, self, experience) regarding aspects of one's performance or understanding" (p. 81). In a meta-analyses of feedback studies (Hattie, 2012) found that, "feedback has one of the highest effects on student learning," (p. 18), suggesting that "feedback can be powerful" (Hattie & Timperley, 2007). Within the situated learning experience of the mixed reality simulation experience and the group learning environment of the peers and supervisors watching the simulation/debriefing experience, educational leadership students can co-construct their learning through an insightful feedback process called debriefing (Dede, 2009; Falconer, 2013).

Debriefings are an effective component of the simulation-based learning experience (Fanning & Gaba, 2007). Following simulations, debriefing engages and enhances students' self-assessment for effective learning (Kolbe et al, 2015). Within the debriefings, the student who performed the simulation, supervisors and other learners can explore the simulation experience and offer feedback of the observation and reflection by both debriefer and student (Gardner, 2013; Sawyer, et al., 2016). Debriefers facilitate the dialogue following the simulation and

position themselves as co-learners within the process (Fanning & Gaba, 2007; Sawyer, et al., 2016).

Learner self-assessment is often an explicit goal of debriefings, leading to learning beyond the performance of the simulation itself, as the learner continues reflecting about the simulation (Arnold et al., 1985). Learner assessment promotes reflection upon strategies, goals, processes, and outcomes to adapt behaviors for effective learning following debriefings (Schmutz & Eppich, 2017). Reflective practices as part of debriefing processes enhance the simulation-based learning process (Harvey, et al, 2012; Nelson, et al., 2014). Critical self-reflection provides the aspiring school leader with a sense of personal responsibility for improving practice which is necessary for growth (Storey & Cox, 2015). Learner reflection can focus on the cognitive domain (Bloom, et al., 1956) and the skills developed through the debriefing, but also the affective domain (Krathwohl, et al, 1964). Cognitive processes can interplay with emotions and reactions in situational events like simulations (Rowe, 2013; 2014).

The emotional labor of using simulations with debriefing has been noted in the research (Author, 2021). Debriefing feedback can evoke negative emotions which affect student learning (Falchikov & Boud, 2007) and positive emotions, which can support motivation for learning (Rowe, et al, 2015). In fact, emotions may be central to all learning (Boud & Walker, 1998) and some have called for the interdependency of the cognitive and affective domains while theorizing reflection for learning (Thompson & Thompson, 2008). Empathy, the ability to elicit a corresponding emotional state in oneself, includes: (a) emotional contagion, the automatic mirroring of others' feelings, (b) proximal responsivity, the affective response when witnessing others' moods in close contact, and (c) peripheral responsivity, the affective response when witnessing others' moods in a detached context (Reniers et al., 2011). Emotional recognition, such as empathy with the avatar in the simulation and recognition of one's own emotional responses, is a germane learning outcome of simulations with debriefings (Author, et al., nd; Author, 2021).

The United States Army engaged in learner reflection following debriefings for engaging in feedback in a method called *After-Action Review*, which focuses on the ways one's performance met benchmarked standards and how one might improve in future circumstances (Sawyer & Deering, 2013). Like the *After-Action Review,* a debriefing style with a focus on learner self-assessment called a *Plus-Delta* debriefing framework promotes reflection on simulations and individual performance. The *Plus-Delta* approach describes a debriefing strategy in which "participants are asked to reflect on the entire simulation event (or portions thereof) and assess their individual and/or collective performance" (Cheng et al 2021, p.2.). *Plus-Delta* approaches to debriefings are conceptually and implementation easy (Cheng, 2021). Using a *Plus-Delta* approach, students in debriefings engage in self-assessment, leading to further learning beyond the simulation, itself (Cheng, et. al. 2021; Davis et al, 2006). Debriefers focus on asking questions, such as: What went well (the *plus* question)? What would you do differently (the *delta* question) (Eppich & Cheng, 2015; Mullan, et al., 2013; Zinns et al., 2017)? A third question can preface the plus-delta approach to debriefings: How do you feel? Addressing the emotional response first enables participants of the simulation to process anxiety following the simulation to subsequently address the plus and delta questions (Verkuyl et al, 2018).

Connections to Current Research

Mixed reality simulations provide a safe environment for educational leadership students to confront stressors related to learning as they adopt leader identities for successfully conferencing in difficult conversations with parents or teachers without negatively impacting others (Piro & O'Callaghan, 2020, 2021; Dawson & Lignugaris/Kraft, 2017; Dieker et al., 2014). The ability to handle stress has been found to be an important skill arising from using simulations (Gul & Pecore, 2020). Additionally, the reflective processes of debriefing simulations have been found to be positive for learning (Harvey, et al, 2012; Nelson, et al., 2014). A modified *Plus-Delta* debriefing approach uses three steps: asking students to reflect upon how they feel following the simulation; asking them what went well in the simulation; and asking them how they might improve (Eppich & Cheng, 2015). This modified *Plus Delta* approach to debriefing (Eppich & Cheng, 2015) was studied in the current research to understand participants' experiences.

Method

Research Design

This study investigated debriefings in simulation experiences using an exploratory case study design (Yin, 2014). Data were collected over one academic year. The case was bound by students participating in an educational leadership program in two semesters of an academic year taking two consecutive clinical courses that used mixed reality simulations with debriefing protocols in the curriculum. A debriefing experience open-ended survey collected responses about the learning and guidance in debriefings immediately following each debriefing. Concurrent with this data collection, in person and video observations, written reflections, and interviews explored the participant perceptions of learning from the debriefing in simulation experiences for educational leadership student-participants.

Research Question

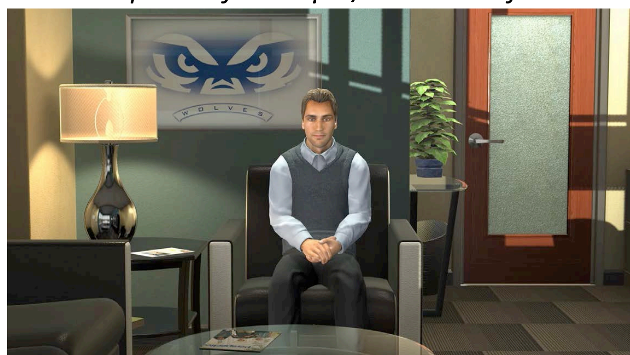
The following exploratory research question guided the study: How did participants perceive the value of debriefings for learning skills and dispositions following mixed reality simulations?

Setting

The setting for the study was an educational leadership program at a state university in New England, United States. Student participants were enrolled in two subsequent educational leadership clinical courses in one academic year which were augmented with 15–20-minute mixed reality simulations which were delivered via Zoom from Mursion. The physical component was the computer screen with live human students depicted from cameras on their own computers and the virtual component was the computer screen depicting an avatar working with Mursion®, a California based company which creates virtual reality environments "where professionals practice and master the complex interpersonal skills necessary to be effective in high-stress professions" (Mursion®, nd).

Participants conferenced with an adult avatar for each conference, with the avatar being re-purposed depending on the scenario plot. In the first semester, participants conferences with a parent avatar and in the second semester, with a teacher avatar. Figure 1 depicts a view within the Zoom platform of an adult avatar as seen by the participant conducting the conference, as well as by their student peers, two clinical supervisors, and the researcher.

Figure 1
Screen Capture of Principal/Parent Conference Scenario



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Two simulation scenarios were used, one for each semester, and participants delivered their performances twice each semester for a total of four simulations, approximately sixty to eighty total minutes of simulation/debriefing time per participant, eight hours of simulations/debriefings overall in the year of study. The first simulation, conducted twice in the first semester, focused on conducting a difficult parent conference with a parent who did not agree with district policy. The second simulation, conducted twice in the second semester, focused on delivering instructional feedback to a teacher struggling with student-oriented pedagogy. Table 1 illustrates the courses, frequency and timing of the debriefings following the simulations, and the scenario focus of the simulation.

Table 1
Courses, Simulations and Scenario Focus

Total Courses	2 Subsequent Seminar-style Clinical Courses in Educational Leadership
Total Simulations and Debriefings	Total of 4
Total Time for Simulations/ Debriefings per Participant	60-80 minutes
Scenario Focus	Seminar 1- Conduct a principal/parent conference and deliver difficult news to a parent that a student must be suspended for infraction of a district policy.

	Seminar 2- Conduct a principal/teacher conference and create a plan of action to increase student talk in the teacher's class.

Sampling and Case

Educational leadership students pursuing an administrative certificate concurrently with an Ed.D. in Instructional Leadership comprised both the population and sample (n=5). See table 2 for the case profile demographics.

Table 2
Case

Pseudonym	Self-Identified Gender	Self-Identified Race	Educational Level
Kiley	Female	White	Current EdD student in Instructional Leadership
Steve	Male	White	Current EdD student in Instructional Leadership
Gloria	Female	White	Current EdD student in Instructional Leadership
Joanne	Female	White	Current EdD student in Instructional Leadership
Tammy	Female	White	Current EdD student in Instructional Leadership

Debriefing the Simulations

The two clinical supervisors, who also served as district superintendents, were assigned to participants for the seminar and related clinical experience were present and viewed each performance in the simulator in conjunction with the subsequent debriefings. Debriefings followed a Plus-Delta approach, with three questions being asked following a simulation: 1) How do you feel? This question was meant to illicit reactions and emotions associated with the debriefing to calm and release anxiety prior to the substance of the feedback; 2) What went well? This question was designed for the participant and debriefer to acknowledge actions that were positive for the expectations of the scenario; and 3) What would you do differently? This question was designed to guide the participant through a reflective analysis of how to improve

the simulation performance in subsequent simulations and to assist a transfer of knowledge to professional contexts. Participants participated in their own debriefings but additionally, listened to the debriefings of other members of the case following all simulations. Debriefings were provided from both clinical supervisors for each participant and lasted between 5-8 minutes, twice per semester, after each simulation for a total of twenty to thirty-two minutes per participant, or one hundred to one hundred and sixty minutes of debriefings for all participants during the year of study.

Data Sources

There were six modes of data sources: a demographic survey, live and video capture of observations of the debriefings, debriefing experience open-ended survey, written reflections, a debriefing protocol, and exit interviews. The main forms of data were the reflections and interviews. The other forms of data were used for triangulation and trustworthiness purposes.

Participant Demographic Survey

A participant demographic questionnaire was administered just prior to the start of the first mixed reality simulation session in the fall semester of the study year. The survey asked respondents to indicate their preferred mode of communication, gender identification, occupation, subject and level of teaching experience, ethnicity, and use of past mixed reality simulations.

Live Observations and Video Capture

The mixed reality simulations and debriefings were recorded via Zoom, capturing both participants and student avatars as the participants interacted with the simulated avatars. The researcher watched the original simulations in live-time and re-watched the video data.

The Debriefing Experience Survey

Participants completed an open-ended survey informed by Reed's (2012) debriefing scale immediately following each simulation with questions related to reactions, what went well in the simulations, and how to change. Examples of questions related to analyzing thoughts and feelings about the debriefings included:1) Reactions/Self-awareness: What did you feel? Other awareness: How do you think others felt? Metacognitive: What is your overall assessment of the performance? 2) What went well? Review the facts. Discuss understandings and skills. Generalize to real situations. 3) How do you want to change? Specific strategies. Takeaways. Goals.

Participant Semi-structured Exit Interview Protocol

A researcher-created semi-structured interview protocol was employed immediately after and final simulation session after the second semester of the research study. This instrument gathered data about the participants' perceptions of debriefings from the four

simulations they conducted during the year-long study. Participants were asked about their beliefs about the effectiveness of the debriefings.

Reflections

The reflection instrument was given twice at the end of each semester of the study. It was modified from Petranek's (1992) E's of debriefing and included questions such as: Events: What went well, What would you change?; Emotions: Discuss your feeling during and after the simulation and after watching your video?; Empathy: How do you think the avatar felt?; Explanations: What is your analysis of the overall experience?; Everyday application: How do you see yourself responding to a situation such as in the workplace now that you have participated in the simulation?; and Employment of information: How do you see translating these skills and emotions into your everyday life?

Debriefing Protocol

The debriefing protocol was completed by peers and facilitators following each simulation. Based upon a modified Plus Delta approach to debriefing (Eppich & Cheng, 2015), this written debriefing was provided to participants following the simulations. Items addressed included reactions (self-awareness, empathy and metacognition); what went well? (facts, understandings and skills); and application to real situations; and change (strategies, take-aways, goals). The alignment of research questions, data sources and constructs are demonstrated in Table 3.

Table 3
Alignment of Research Question, Data Sources, and Constructs

Research Question	Question Type	Data Sources Used	Constructs
How did participants perceive the value of debriefings for learning skills and dispositions following mixed reality simulations?	Qualitative	Debriefing experience survey Written Reflections Debriefing Protocol Interviews Observations	Thoughts and feelings; learning; application; goals

Data Collection and Analysis

The following table 4 demonstrates the participant and the data sources:

Table 4
Participant Data Collection Sources

Pseudonym	Demographics	Interview	Video Observations	Post-Simulation Reflections	Debriefing Survey	Debriefing Protocol
Kiley	X	X	X	X	X	X
Steve	X	X	X	X	X	X
Gloria	X	X	X	X	X	X
Joanne	X	X	X	X	X	X
Tammy	X	X	X	X	X	X

The demographic survey was delivered via Google Docs and took approximately 5 minutes to complete. The purpose of the demographic survey was to provide information about the case. Semi-structured interviews were collected via Zoom and lasted approximately 60 minutes each. Video observations of the debriefings were collected via Zoom and lasted approximately fifteen to twenty minutes. Each observation video was sent via an email link to participants. Written reflections were written at the end of semester within Blackboard, a learning platform used in the course, and were approximately 4 pages in length. The debriefing surveys was provided via a Google Form link and were approximately 3 paragraphs or 1-2 pages in length. The debriefing protocol was delivered via Google Docs in an email link and took approximately 5 minutes to complete.

Manual coding of the observations and reflections included deductive codes related to the literature on debriefings, such as self and other-awareness, reflection, debriefing difficulties and learnings, feedback awareness, value of debriefings (Miles, Huberman & Saldana, 2014) and inductive codes, such as adopting a growth mindset and lessons learned, with *in vivo* initial codes connected to both (Miles, et. al, 2014), finally being reduced to categories (Saldana, 2016). A codebook with each phase of reduction of the data (Crabtree & Miller, 1999) demonstrated the links from participant words to the emerging codes. Last, the data from the interviews and reflections were compared with the data from the observations and survey to triangulate the themes (Saldana, 2009). The final themes represented all data sources and were representative of all participants. Participant quotes are verbatim from the data, except that brackets are used for clarity of the narrative.

Trustworthiness and Threats

Credibility is when the reality that is presented resonates with the participants (Krefting, 1991). Credibility was established by a prolonged engagement with the case—a full academic year—as well as through triangulation of data (Creswell, 2013). Dependability was established through a systematic chain of evidence (Yin, 2009) used throughout data collection and data analysis, and confirmability was established by clearly detailing the methods of the study. A

researcher journal was established at the onset of the study and used through each data collection phase and bracketing addressed personal, methodological, and theoretical issues.

Findings

There are two overall themes that emerged from this study: 1) new skills and dispositions developed; and 2) learned behaviors transferred to current professional contexts or were perceived to have the potential to transfer to future educational leadership contexts.

Skills/Dispositions

Participants expressed that the debriefings following the simulations facilitated learning to conference as an educational leader, resulting in improved skills and dispositions. In her debriefing survey, Gloria stated that the debriefers' suggestions "helped me learn how to state the purpose of the meeting, guide the conversation, avoid interrupting or talking over the parent and always remain kind, calm, and firm." In her interview, Gloria expanded on the skills she developed by saying, "I learned to create goals from the feedback. I also learned from listening to other students' debriefings. I took notes and would reflect on my own simulation and apply other students' feedback to my own goals." Tammy agreed in her survey by reacting that, "their suggestions helped me learn how to state the purpose of the meeting, guide the conversation, avoid interrupting or talking over the parent and always remain kind, calm, and firm."

In his survey, Steve noted the importance of school policy as an outcome of his debriefings in the first semester. "The debriefers helped to strengthen my confidence in myself and feel comfortable in making a firm decision that is supported by school policy." In his interview, Steve noted that "I learned to set appropriate limits, have a boundary with the parent or teacher. And to feel confident with those limits. I can be too accepting, so learning to set parameters was helpful for me." Joanne acknowledged a similar perspective when she stated in her first reflection that she learned to "be prepared for the meeting with clear knowledge of district policy and also, a plan for moving forward with the student."

In her interview, Kiley emphasized how the first debriefing helped to prepare her for the second. "It was because I got that feedback, wrote down notes, thought of new things I wanted to try, [such as] how to drive the conversation, based on that debriefing and feedback." She continued, "they [the debriefings] reinforced what we were expected to do."

Having the feedback from the debriefings helped participants to develop dispositions that helped them to grow as learners. In her interview, Gloria stated, "I learned not to take the feedback personally and look at it objectively. Some people spent time defending their behaviors instead of hearing and internalizing it. I could see they were in a defense mode, and it made them spin." In her second reflection, Joanne noted that the debriefings assisted her to recognize the importance of being student oriented, as well. "Always focus and return to the student and their health, safety and well-being." She consistently wrote a t-chart after each debriefing that reflected the structure of the debriefings where she noted emotions, positives, negatives, and she reflected from those notes. (Interview).

Beyond these generalized skills, various dispositions developed through the debriefings. Specifically, participants recognized emotions and emotional regulation, and developed both a reflective stance and a growth mindset.

Emotional Recognition and Emotional Regulation

Kiley reacted to the debriefings when she was asked to share her emotional state prior to the start of feedback from her debriefers. “Having that step, before I got feedback was like a big exhale. Having that ability to exhale, talk about emotions was helpful” (Interview). Gloria reflected upon the anxiety she experienced following the first debriefing. “The first simulation [debriefing] made me feel extremely anxious. I tried hard to control my emotions, but in watching the video I sensed some of the same feelings again, and I could see my frustration.” Kiley stated, “At the time the experience was stressful and caused feelings of anxiety, but that is also what happens in real life when dealing with uncomfortable situations” (Reflection 1). In her first reflection, Joanne felt similarly. “ My heart was pounding, and I was surprised by how nervous I felt talking with a fake person and then debriefing in front of my teachers and classmates.” Upon reviewing his debriefing in his simulation video, Steve recognized his body was displaying tension with the parent-avatar in simulation one. “ I know there are things I could improve such as my body language and level of tension. I want to remain as relaxed as possible to foster an atmosphere of support, respect, and trust with all families.”

Gloria recognized the emergence of anxiety with the debriefings and how that anxiety improved in the second semester. “I was very nervous prior to the first simulation [debriefing]; and disappointed after my first simulation [debriefing]. I was anxious and eager prior to my second semester [debriefing] and confident following the wrap up of the second.” Kiley also perceived emotional management in later debriefings. “We also had the ability to see others handling the same situation, which allowed us to mentally and emotionally prepare for our own turn.” Though the debriefings were sometimes difficult to hear, Tammy related the benefits of receiving feedback for personal growth when she said, “I learned I have to exhibit control, and levelheadedness (Interview) . Kiley reflected upon her emotional regulation in the second semester of the simulations and debriefings. “In the second semester, because I had prepared for the same scenario, and had the experience of the first semester’s debriefings. I felt in control and handling the situation in the best interest of both parties.”

Empathy building was part of the recognition of emotions and emotional management from the debriefings. Joanne stated (Reflection 1), “I tried to imagine how I would feel as a parent. I think that I would feel like the punishment was overly harsh.” This empathy developed into emotional regulation. Joanne continued, “I have started to feel much more peaceful with myself, less judgmental and more empathy towards others and their struggles. I have started to feel less fear when facing situations where there is conflict and discord.” Steve also maintained that it was important to understand the avatar’s emotions to build connection and reduce pressure from the conversation (Reflection 1). In reflection 1, Kiley noted her own empathy building from watching the simulations with debriefings. “There were times when I was watching my peers because they might have been struggling with the scenario and I wondered, how they are going to get through the debriefings. I was concerned for them.”

Self-Reflection Leading to a Growth Mindset

All participants noted that self-reflection was a disposition they developed from debriefings. In her interview, Kiley noticed that "self-reflection was a disposition I gained, and with it came the ability to take the constructive feedback from another person and not take it personally." Her second reflection mirrored this sentiment. "Being able to self-reflect, get feedback from our clinical supervisors was the best opportunity for growth in the second semester." The debriefings led to constructive reflection for Tammy, who noted in her interview that "they [the debriefers] allowed me to reflect in a constructive way. They gave me a framework to think about what I could do better. For planning, to prepare for the following simulations. They gave me a perspective of what needs to be done." Steve agreed. "I learned reflective skills. I am confident that I have the skills for future difficult conversations." In her survey, Joanne noted that, " the debriefing is a nice check-in, to recalibrate and think about performance".

A second disposition gained by all the participants from the debriefings was the development of a growth mindset following reflection. In her interview, Gloria explicitly stated her development of a growth mindset. "The whole process gave me a growth mindset. They [the debriefers] said you did this well, and there are some other areas you could improve. And then the meeting did go better in the next simulation." Steve clearly demonstrated the development of a growth mindset when he stated in his first reflection that, "mistakes allow people to learn and grow, and constantly improve as a society. This is what I will be taking away with me from this simulation and debriefing experience." In her second reflection, Kiley noted how debriefings provided elevated learning. "Getting feedback from our clinical supervisors…was the best opportunity for growth for the second simulation". Her interview data suggested a similar sentiment when she said that she developed a "growth mindset—what do I need is progress—not perfection. To take that information and use it for the future makes us good leaders." In the debriefing survey, Joanne summarized this disposition resulting from the debriefings. "This type of feedback for continuous growth is priceless."

In her interview, Tammy noted the intensity of having two debriefers following her simulations and how they induced anxiety, but how she pushed through and learned from the debriefings. "Because there were two debriefers, it was a bit intimidating. But so helpful. The discomfort was because I was growing. Uncomfortable, but needed." Having two debriefers following the simulations was, "very rich, like having both a brownie and a fudge brownie. It was a lot but still appreciated. It was still chocolate."

Transference to Professional Contexts

Participants noted the ways in which they translated their burgeoning leadership skills and dispositions following their experience with the simulations and debriefings into application into present circumstances or considered that application into future leadership contexts. This applied knowledge included conflict resolution, listening as a leader, and transferring the growth mindset to professional practice.

The first transfer of knowledge related to conflict resolution. In her second reflection, Gloria noted that she will, "regulate my emotions based on the environment and intended

outcome of what I desire from the meeting." As an instructional coach in her current position, Gloria noted the difficulty of working with people who were in a defensive mode, and that they were rationalizing their behaviors instead of learning from the feedback. She recognized that she wanted to create contexts where teachers "integrate feedback, internalize it and activate the feedback." She continued, "defensiveness means that people will not hear the feedback." The importance of feedback to Gloria was paramount. The debriefings, "are a practice that should be increased. Also, having an audience for debriefing, putting yourself out there, really raised the bar for risk taking." Performing in front of others and receiving a public debriefing was a benefit that would impact her own instructional coaching (Interview).

In her second reflection, Kiley reflected on the conflict within the simulations and what she took from the debriefings. "Most people prefer to avoid conflict, but in work and everyday life, that is not possible. Learning how to turn conflict into resolution is a true skill." Kiley noted that asking for feedback from peers and supervisors, even if it was difficult, was a practice she hoped to continue following the debriefings and that this sort of mentoring was a mindset that she valued and would continue herself in future supervisory positions (Interview).

In his first reflection, Steve stated, "Now that I have experienced this type of situation and pressure, I feel more prepared to support families, school safety, and school policy." He continued, "I want to feel more confident in the decision, because it protects the safety of all students. I need to lean more into the policy and why it is important as a whole." In his interview, Steve recognized that having that conflict within difficult conversations (both in the simulation scenario and the following debriefings) is endemic to being a leader in education. Approaching difficult conversations from a leadership perspective, and being someone who makes instructional improvements, will help him to structure strategies to set up and support learning prior to engaging in those difficult conversations as an educational leader.

Joanne recognized the importance of the debriefings for framing future conflictual conferences with a parent or teacher. "I think learning how to have a tough skin; it's not a person thing; it is the just the situation as a leader to have to receive and give difficult feedback". (Interview). She reflected that while she was not yet in a leadership position at her school, the debriefings helped her to become a more active listener in her own parent meetings. Joanne's discussed that she would transfer the disposition of listening within difficult conversations to leadership contexts. She learned that "letting them say their piece and repeating back" was important and that she would state, "Let me make sure I understand that this is what you said, this is our plan going forward." In her second reflection, Joanne remembered adopting the four-part compassionate communication process from Rosenberg's (2015) *Nonviolent Communication* to help her manage her communication in the debriefings. She stated that the debriefings, "were an incredible opportunity and reminder to communicate clearly and compassionately." She continued that for her, the lesson learned that would transfer into future leadership practices was that "communication based on mutual respect will help each person contribute the best they have to offer to our collaborative endeavor and make our shared success possible."

Tammy recognized that at times, she needed to hear difficult feedback about her performance in the simulations as part of developing a growth mindset. In her interview, Tammy reacted that the debriefings changed her perspective about how to coach teachers. Some teachers in her district had a difficult time learning and growing following coaching encounters

with her. Tammy related that one teacher wrote unprofessional goals that were submitted to her, but the teacher was still proud of them. Following receiving structured feedback in the simulation debriefings, Tammy decided to model goal-writing to help the teacher to rewrite them with her feedback. The feedback she had received from the debriefings helped her realize how crucial feedback was for personal and professional growth, and to transfer that practice of providing feedback into her own coaching of teachers.

Summary of Findings

Participants expressed that the debriefings following the simulations facilitated learning to conference as an educational leader, resulting in improved skills and dispositions related to leadership. Some of those skills and dispositions included emotional recognition and management and adopting a growth mindset. Participants further reflected on transferring skills to the professional workplace, such as conflict resolution, listening in difficult conversations, and transferring a growth mindset when working with teachers by modeling skills.

Discussion and Implications

The first theme was that participants emerged from the simulation debriefings with new skills and dispositions. A disposition that all the participants acknowledged was the ability to recognize and regulate their own emotions; and further, to develop empathy with the avatar's emotions. Emotional labor occurs from using simulations with debriefings (Piro & O'Callaghan, 2021) and further, emotional recognition and regulation are integral to cognitive and affective empathy (Bertrand et al., 2018; Eisenberg, 2000; Hall & Schwartz, 2019; Lockwood et al., 2014). Comprehending the feelings and experiences of others by imagining what that person was feeling and being able to elicit a corresponding emotional state in oneself (Reniers et al., 2011) was a disposition gained from the debriefing and reflecting process. An implication for practice is that one needs to modify one's own emotional state prior to a simulation and debriefing experience and that this process may need to be explicitly taught to students in simulations and debriefings (Brooksbank, 2022). In essence, students need recognition of deep acting, which is attempting to modify one's own emotional state to bring it into agreement with an emotional state that is beneficial for the present situation (Brooksbank, 2022; deCastro et al., 2004; Joseph & Newman, 2010). Further, emotional awareness abilities have been shown to be positively related to self-efficacy beliefs (Alrajhi et al., 2017; Valente, Lourenço et al., 2020; Valente, Veiga-Branco et al., 2020). For educational leaders, this implication suggests that emotional awareness and regulation may prepare them for confrontational conferences with parents or teachers, and that preparation for emotional responses is a step toward developing self-efficacy in conferencing as an educational leader. A recommendation is to consider social-emotional learning that targets emotional recognition and emotional regulation processes and specifically, to focus on empathy building in educator leadership programs using simulations with debriefings.

Related to the awareness of anxiety, stress and empathy from the debriefings is that participants suggested that a growth mindset was a disposition they adopted following

experiencing difficult emotions and awareness of the avatar's emotion. Students with a growth mindset do not blame outside factors for their failures, and they look for ways to improve on the next assessment (Dweck, 2006). Their beliefs in the importance of continued effort permits them to view failure as a motivator that promoted further learning (Blackwell, et al., 2007; Plaks & Stecher, 2007). Students with a growth mindset use constructive feedback to improve, and they are willing to learn from the successes and failures of others (Saunders, 2013), even when feedback is negative (Dweck, 2006).

An intervention addressing mindset may be advantageous for educational leadership students who are involved with debriefings. However, interventions should be aligned to the academic curriculum for the interventions to be effective (Saunders, 2013). As a result, growth-mindset instruction should relate to the explicit outcomes of the scenarios and expectations for the simulations and subsequent debriefings (Brooksbank, 2022). In the context of this study, this alignment suggests that growth mindset instruction should be oriented toward the skill of conferencing in difficult conversations as an educational leader to be effective for a growth mindset perspective. Future research might explore the relationship between growth mindset intervention types and simulation debriefing outcomes.

The second theme suggested that participants perceived the ability to transfer their acquired knowledge to professional contexts following simulation-based debriefings, or to consider the possibility of knowledge transfer when they became educational leaders. Transfer of learning is "the application of acquired competencies in new contexts" (Rivière, et al., 2019). Research has suggested that there may be metacognition benefits of knowledge transfer beyond simulations with debriefings (Ganier, Hoareau, & Tisseau, 2014; Miles, 2018). Additionally, there is a potential for both declarative and procedural knowledge to transfer to real-world contexts (Bossard et al, 2008) and further, that learning transfer from one context to another engages higher order cognitive processes (Bransford, 2009, p.6). The implication of the current research and related literature is that simulation-based debriefings may be effective for cognitive and emotional knowledge for transferring knowledge to educational leaders' professional contexts. More research is necessary to make this connection explicit.

The debriefing sessions following the simulations were, by their structure, social interactions "between individuals and materials in authentic contexts (Lave & Wegner, 1991, p. 2). Some researchers on simulation debriefing have suggested that learning occurs primarily through the debriefing, not the performance of the simulation (Cheng, et al, 2014; Shinnick et al, 2011). Therefore, debriefing facilitators should be trained to use a debriefing framework (Cheng et al, 2014) that connects the expected learning outcomes in the real-world to the feedback. An implication is that choosing the right debriefers is critical for the development of skills and the transfer of knowledge for educational leadership students, as is providing a debriefing structure, such as the Delta-Plus debriefing protocol used in this research. A recommendation is that debriefers should be experts in their fields and immersed in the real-life contexts that match the learning outcomes of the debriefings. This research used a modified Plus Delta approach to debriefings; however, other debriefing approaches might be investigated. Additionally, future research might compare simulations with no debriefings to those with debriefings to understand the impact of the debriefings on learning.

Limitations

Because there was racial homogeneity in the sample, population validity (Gall, et al., 2003) may limit generalization of the study's findings. Participants in this study were all Ed.D. in Instructional Leadership students who were also obtaining a state certificate for educational leadership valid up to the Associate Superintendent level in districts. Therefore, their background in teaching and learning theory may have biased them to perceive learning concepts, such as growth mindset and the connection between emotions and learning, and this knowledge may have impacted their perceptions. The specificity of the participants' educational backgrounds and the small number of participants makes this study contextual, and the findings are local for this case. However, educational leadership programs considering simulation-based learning with debriefings may find value in the outcomes for developing their own debriefing platforms.

Conclusion

Through a modified Plus-Delta approach to debriefing, this study found that educational leadership students gained the skills and dispositions of educational leaders related to conferencing with various stakeholders and perceived that their acquired knowledge transferred, or will transfer, to leadership contexts in schools. Educational leadership programs might consider social-emotional and growth mindset training for students engaged in simulation-based debriefing. Further, these programs should consider relying on experienced debriefers and structured debriefing protocols to enhance learning transfer from simulation debriefing settings to educational leadership contexts.

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Combining Mentoring and Coaching to Support Aspiring Leaders' Development: Participants' Voices

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This study of 77 aspiring leaders of a university-based principal preparation program uses results from a questionnaire to examine the perceived benefits of two types of support, mentoring and coaching, provided throughout the program. Interaction with both mentors and coaches received high ratings of value toward meeting students' needs as future administrators. In addition, four similar themes surfaced in response to questions regarding what was learned from mentors and coaches. The importance of communication skills, organization and time management, school management skills, and building relationships were identified as areas of learning resulting from interactions with mentors and coaches. The results suggest inclusion of both types of support in principal preparation programs may add the additional and more personal socialization component to help aspiring principals develop into effective leaders of diverse schools and who will remain in educational leadership positions.

Keywords: mentoring, coaching, aspiring leaders

Leadership preparation programs have attempted to redesign their programs to develop and prepare aspiring leaders for the rigors and realities of school leadership in support of principal retention and positive impact on student achievement (Drago-Severson, Maslin-Ostrowski, & Blum-Destefano, 2018; Goldring, and Taie, 2018; Grissom, Egalite, & Lindsay, 2021; Kutsyuruba & Godden, 2019; Reames, Kochan, & Zhu, 2014). One element of principal preparation programs that contributes to aspiring principals' effectiveness and positive integration into the profession is mentoring (Author and Author, 2019; Crow & Whiteman, 2016; Gimbel, P., & Kefor, K., 2018; Gray, 2018; Kutsyuruba & Godden, 2019). Although several studies have confirmed the benefits of providing mentoring for aspiring principals as part of preparation (Author & Author, 2019; Cherkowski & Walker, 2019; Clayton & Myran, 2013; Clayton, Sanzo, & Myran, 2013; Crow & Whitman, 2016), researchers have identified gaps in the mentoring research associated with the learning and socialization of aspiring principals (; Author & Author, 2019; Bengston, 2014: Crow & Whiteman, 2016). After reviewing the mentoring literature, the authors endorse Gray's (2018) observation that principal preparation programs would benefit from a framework that incorporates mentoring and coaching to socialize aspiring leaders into the principalship, thereby impacting their retention in public school leadership.

This study addresses the need for research on combining mentoring and coaching by examining one university-based leadership preparation program's support of aspiring principals through separation and definition of the activities in which experienced principals engaged with their aspiring principal protégées and did so within the conceptual frames of professional socialization and personal/professional learning. Specifically, we examined aspiring principals' perceptions of two types of professional support provided to them as part of a university leadership preparation program – experienced principals from other schools as mentors and immediate principals as site-based coaches. This study aimed to determine whether combining mentoring and coaching contributed to aspiring principals' socialization as it developed their knowledge and skills learned in the classroom. The research questions that guided this research study were:

1. How did aspiring principals perceive the value of their interactions with their mentor principals?
2. How did aspiring principals perceive the value of their interactions with their site-based principal coaches?
3. What did the aspiring principals learn from their interactions with their mentors?
4. What did the aspiring principals learn from their interactions with their site-based principal coaches?

Seventy-seven program participants' responded to a questionnaire analyzed for themes regarding the perceived benefits of their interactions with their mentors and coaches. This paper is presented in six sections: Conceptual framing, literature review, context, methodology, findings, and discussion.

Conceptually Framing the Study

We examine aspiring principals' perceptions of their interactions with mentors and coaches through the lens of professional socialization. Researchers have employed socialization

theory to explain how aspiring principals develop and understand their professional leadership roles (Bengston, 2014). Gokci (2020) defined socialization as ". . .a process through which newcomers internalize the norms, attitudes, and values of a profession." (p. 1). Gokci emphasized the importance of learning and implementing the knowledge, skills, and theory acquired throughout the preparation program to respond to the unexpected occcurrences of a principal's daily responsibilities. Bengston (2014) defined socialization in terms of role identity, "the process that an individual experiences as one becomes acclimated to the new role of a school principal" (p. 726) within the context of the specific organization.

Bengston further summarized Van Maanen's (1976) three phases of socialization association with school administrators as (1) *anticipatory socialization;* (2) *professional socialization*; and (3) *organizational socialization*. *Anticipatory socialization* occurs as teachers explore the possibility of becoming a principal from their current understanding of the principal's role. This stage may occur as the teacher enters the field of education and experiences various professional roles in the education of the students. Through *professional socialization,* aspiring principals engage in formal preparation and training that allows familiarity with the roles, tasks, and organizational expectations associated with the principalship within the specific context in which they will lead. Matriculating through the content and coursework of a principal preparation program provides for the acquisition of this knowledge and skills. *Organizational socialization* generally occurs as the individual enters the profession and assimilates into the organization. Although the three phases overlap, this research only examined the professional socialization phase and how engagement with a mentor and coach may contribute differently to the aspiring principal's understanding of the roles of the principal as they progress through their principal preparation program.

Mentoring and Coaching

Mentoring and coaching as modes of socialization and professional learning are critical strategies in developing aspiring and early career educational leaders, supporting the retention of practicing principals, and improving career principals' practices (Crow & Whiteman, 2016; Gray, 2018; Oplatka & Lapidot, 2018). These two practices have been identified as crucial factors in effective leadership preparation programs (Crow & Whiteman, 2016; Gray, 2018, Orr, 2011; Orr & Orphanos, 2011). Coaching and mentoring can connect theory and knowledge to practice and support changes in role identity and socialization from teacher to school administrator (Gray, 2018; Orr, 2011).

The literature associated with mentoring and coaching for pre-service administrators also identifies issues related to these practices, such as how mentors and coaches are selected and trained and the variety of expectations and definitions of mentors and coaches within and among preparation programs (Crow & Whiteman, 2016; Gray, 2018; Lindle et al., 2017; Wilson & Bloom, 2019). As noted earlier, mentoring and coaching are terms often used interchangeably. However, some theorists and researchers have pointed out some key differences (Crow & Whiteman, 2016; Gray, 2018; Lindle et al., 2017; Wilson & Blook, 2019), with coaching associated more with post-preparation and organizational socialization (Crow & Whiteman, 2016; Gray, 2018; Lindle et al., 2017; Wilson & Blook, 2019). In reviewing the school leader coaching and mentoring literature, mentoring tends to be a more global concept, whereas coaching is more defined around

developing skills and knowledge (Crow & Whiteman, 2016; Gray, 2018; Lindle et al., 2017; Wilson & Bloom, 2019).

Mentoring

For this project, we extended the current literature by defining mentoring and coaching as dissimilar supports for aspiring principals. The term mentor is defined as an experienced administrator who forges a learning partnership with a leadership program mentee, empowers the mentee to reflect, and supports the professional and personal needs of the mentee (Gray, 2018). Mentoring must occur in a safe and non-threatening environment free from fear of evaluation (Alsbury & Hackmann, 2006). Through mentoring, aspiring administrators are offered the opportunity to share their experiences in clinical, field-based work and are provided with meaningful feedback, thus increasing their confidence in their leadership skills (Crow & Whiteman, 2016; Gray, 2018; Lindle et al., 2017; Wilson & Bloom, 2019).

Coaching

The term coaching is used to describe a process by which practicing principals use their expertise and past experiences to assist and provide feedback to the protégé in improving performance or behaviors as they go through decision-making (Crow & Whiteman, 2016; Gray, 2018; Lindle et al., 2017; Wilson & Bloom, 2019). Principal coaching improves aspiring principals' effectiveness through feedback and reflection on practices and behaviors (Crow & Whiteman, 2016; Gray, 2018; Lindle et al., 2017; Wilson & Bloom, 2019). Coaches engage aspiring principals in meaningful and authentic experiences, then ask questions that prompt them to reflect and evaluate their practices and decisions (Crow & Whiteman, 2016; Gray, 2018; Lindle et al., 2017; Wilson & Bloom, 2019). Coaching may also provide direct feedback about the effectiveness of aspiring principals' experiences as they engage in real leadership experiences.

As defined, the critical distinctions between coaching and mentoring center around coaches' direct feedback, evaluation of specific leadership experiences, and a focus on knowledge and skills. Alternately, mentors provide support by encouraging mentees' reflection in a non-evaluative supportive environment that may be more conducive to sharing personal concerns and questions (Crow & Whiteman, 2016; Gray, 2018; Lindle et al., 2017; Wilson & Bloom, 2019).

Context

The university program in this study is situated within the boundaries of the fifth-largest school district in the United States, which enrolls approximately 66% of the state's students within its borders. The district's demographics show a predominantly racial/ethnic minority and low socioeconomic student population, creating the need for influential leaders prepared to lead and remain in these schools. Current achievement scores revealed much disparity between groups of the district's diverse demographics, necessitating the development of leaders with the knowledge, skills, and dispositions to be influential leaders of change, confidant and prepared to ensure schools have

effective teachers in every classroom and the organizational structures and supports for the success of all students.

In response to these local leadership needs, the university partnered with the local school district to develop a pipeline for campus and school district leaders. The resulting Preparation Program Partnership incorporated two interrelated bodies of research into its design: (a) aspiring and early career school leadership development and (b) mentoring and coaching as effective induction and professional learning to develop and retain school leaders. This study examines one component of the program – the paid mentoring and coaching support provided to the seventy-seven aspiring administrators in the principal preparation program.

By providing two different types of support, mentoring and coaching, the program posited that the graduates would be better prepared and socialized into the routines of an effective school leader within the context of the local school district needs. Based on the school leadership mentoring and coaching literature, the leadership program's theory of action related to mentoring and coaching was based on the premise that aspiring principals require guidance as they participate in and implement school leadership projects in schools. These projects, incorporated into each course and a two-semester internship, required aspiring principals to have the support of their site-based principals. These site-based principals were labeled coaches. Their role was to provide guidance, support, feedback, evaluation, and opportunity for reflection related to specific projects implemented at the school.

However, program faculty needed more control over the quality and level of support these site-based principal coaches would provide the aspiring principals. Since the site-based principal was responsible for evaluating the aspiring principal as a teacher, program faculty had concerns about the willingness of aspiring principals to ask or question site-based principals' feedback on their performance. As a result, the faculty implemented a mentoring process beyond the site-based principal coach. Mentoring was provided by practicing principals identified by the school district as successful school leaders and outside aspiring principals' evaluative cycle. The mentors underwent professional development through the National Association of Elementary School Principal's national mentor training program. University program faculty also trained and met regularly with the mentors to strengthen their roles in the program, supporting the mentees' professional and personal leadership needs. Mentors met monthly with their mentees to discuss their program and leadership experiences as they worked on their schools' campus plan projects. No parameters were used to limit the types of questions posed by the mentees. Questions could be personal or professional. The mentors also responded to general leadership questions or concerns as the aspiring principals were acquainted with district protocols, processes, and programs.

Additionally, aspiring principals shadowed their mentors for three consecutive days to observe and inquire about real-life principal responsibilities and routines. Being introduced to district routines and expectations was an essential component of the mentors' roles. Faculty and district leaders felt this component would provide connections and support for smooth entry and a long tenure as school leaders. Supporting the mentees through personal issues would aid in developing a support network as the aspiring leaders prepared for leadership roles in the district.

Methodology

A Likert-type and open-ended questionnaire elicited aspiring principals' perceptions of their interactions with their mentors, who were the shadowing principals, and their coaches, who were the site-based principals. Likert-type questions asked aspiring leaders to rate the value of the learning experiences the mentors and coaches provided. Seventy-seven aspiring principals in the program responded to the questionnaire. The group comprised 14 males (18%) and 63 females (82%). Demographics of the group included 11 Hispanics (17%), 11 Black (20%), 5 Asian/Pac Islander (4%), and 50 White (59%) students, showing over-representation of Hispanics and Blacks compared to school district teacher demographics. All participants had at least three years of teaching experience. Descriptive statistics were used to summarize the Likert-type responses.

Open-ended questions asked participants what they learned from their interactions with the mentors and the coaches. Researchers culled reflections from the complete report and analyzed the responses using ATLAS-ti software. Analysis began with the first author applying holistic coding to the data set, as Saldaña (2013) outlined. The first author then coded line-by-line within the holistic codes, applying in vivo codes to the corpus. The authors conducted second-cycle coding using focused coding (Charmez, 2006). Both authors then met to collapse and condense codes into categories, then themes.

In analyzing the data, the researchers employed several procedures to address credibility, transferability, dependability, and conformability threats (Creswell & Poth, 2018; Lincoln & Guba, 1985). There was prolonged engagement with case data, three sets of individual case data over two and a half years. Further, within the analysis the researchers developed a systematic process of coding and categorizing to create themes. Through discussion of these themes, the researchers described what aspiring principals learned from their experiences engaging in the coaching and mentoring process. The team further discussed their involvement as instructors in the program and their engagement with the aspiring principals in the school improvement process to bracket their backgrounds and perceptions.

By comparing the results of the Likert-type with the open-ended questions, the researchers could triangulate the positive or negative perceptions of the aspiring leaders' experiences with mentoring and coaching types of support structures.

Findings

We present the findings in two sections. First, we offer the results in response to Research Questions #1 and #2, which were Likert-type items in the questionnaire. The second section responds to elements related to Research Questions #3 and #4, which were open-ended.

Responses to Research Questions 1 and 2

The authors collected data to respond to Research Questions 1 and 2 using a Likert-type scale of 1 to 5, with one indicating Strongly Disagree and five indicating Strongly Agree. Three items provided data for Question #1. One item provided data for Question #2. Overall, all four Likert-type items resulted in high ratings of perceived value in using both mentoring and coaching in preparing the aspiring leaders for their roles as school administrators, with the highest of 4.45

for their perceived value of mentor meetings and the lowest of 4.04 for their perceived value of interactions with the site-based principals. The specific means for each question in the questionnaire are presented in Table 1 below. The results indicate positive perceptions in response to Research Questions 1 and 2.

Table 1

Responses to Likert Type Items in Research Questions #1 and #2 on a Scale of 1-5 (n=77)

Item Description	Mean
Research Question #1: How valuable toward meeting their needs as future administrators did aspiring principals perceive their interactions with their shadowing mentors?	
Value of mentor meetings in preparing participants as future administrators	4.45
Value of first shadowing experience with mentor	4.35
Value of second shadowing experience with mentor	4.52
Research Question #2: How valuable toward their future as school administrators did aspiring principals perceive their interactions with their site-based coach?	
Value of interactions with site-based principal coach	4.04

Responses to Research Questions 3 and 4

Research Question #3: What did the aspiring principals learn from their interactions with their shadowing mentors?

The top five recurring themes in participants' responses regarding what they learned from their interactions with their shadowing mentors are presented in order of frequency.

1. Building relationships and trust is an essential skill to leading others in reaching your collective vision.
2. Organization and time management are essential to being successful school leaders.
3. Knowledge of specific administrative tasks, such as budgeting, interviewing, managing data, scheduling, and hiring, are essential components of principal responsibilities.
4. Knowledge and experience with the state evaluation instrument for teachers and administrators is essential to instructional leadership; and
5. Effective communication skills, including listening, to engage stakeholders.

Building Relationships and Trust to Reach a Vision

The most frequent lesson learned from shadowing the mentors was the importance of building relationships and creating a collaborative campus culture to facilitate change and promote an environment conducive to teaching and learning. One student stated, "Relationship

building is of utmost importance when building a positive school culture. Build the capacity of the staff in your school." Another student witnessed the skill being modeled and commented, "I also saw the value of positive relationships as I watched her work with her staff and how hard they were willing to work for her." An example of positive relationships was revealed in the statement, "Leading is not just running a building. Leading is attending to everyone's needs in an organized, efficient, and effective manner."

Using Organization and Time Management

The second theme most frequently cited by aspiring leaders was the need for organization and time management to be successful school leaders. "I learned that you will be extremely busy, but being organized will keep it all together for you. Time management is key," was one comment from a protégé. Another aspiring administrator recalled that her mentor provided specific examples in this area when she stated, "Organizational Techniques—she uses binders and trackers to keep things straight, and she shared these and her processes with us." A third aspiring leader added that he learned to "work smarter, not harder, so you are not at school 24/7 hours each week. Balance work time with non-work time."

Knowledge of Administrative Tasks

The third most frequently cited learning area was knowledge of specific administrative tasks, such as budgeting, interviewing, managing data, scheduling, and hiring. Students stated that they learned "Real world examples of how a school functions" and that "Keith shared day-to-day happenings that were very enlightening and his thought process behind his decisions." Another respondent further explained, "Our mentor provided real-life examples regarding administration. We discussed several topics, including the way to manage data, beginning-of-the-year binders/procedures, interview questions, teacher interviews, scheduling, and staffing. Budgeting was frequently mentioned. For example, one student observed a "Demonstration of how to create and submit an actual school budget, including staffing and school equipment."

Knowledge of the State Evaluation Instrument

The fourth most frequently identified learning area experienced by aspiring principals was instructional leadership. They observed "how to supervise staff using the NEPF" and "Pre- and Post-Observation cycle questions." More explicitly, one student wrote that she learned "how to conference with teachers with the intent of providing them with tools to make them better teachers." Instructional leadership was further modeled as the mentors helped with the student's capstone project, as noted by the statement, "She assisted with the NEPF evidence alignment for our visual displays."

Effective Communication Skills

The fifth most frequently cited learning area for aspiring leaders was the importance of communication skills to meet school goals and create an informed and transparent environment.

One respondent phrased that she learned and witnessed "The importance of clearly communicating the vision and expectations across the campus." Another added that she discovered "How to build effective systems within a school staff to create a positive culture and promote effective communication." The importance of this skill, in general, was modeled when the mentor presented "How to promote your school" to her mentee group. One student wrote, "She was great with PR for her school."

Research Question #4: What did the aspiring principals learn from their interactions with their site-based coaches?

The top five recurring themes indicating what aspiring leaders learned from their interactions with their site-based coaches were:

1. knowledge of specific administrative tasks, such as budgeting, interviewing, managing data, scheduling, and hiring.
2. effective communication skills, including listening, to engage stakeholders;
3. culture-building to create a positive school climate;
4. relationship- and trust-building to have others join you in reaching your vision; and
5. organization and time management to be an effective school leader.

Knowledge of Administrative Tasks

Knowledge of specific administrative tasks was overwhelmingly the most frequently cited learning area from the site administrators (coaches). Comments ranged from statements such as, "How to access data. How to facilitate teams" from one student to "How to hire/surplus employees. How to help teachers use data to increase school achievement" from another. One student summarized her learning by writing that she learned how to run a school and its "Day to day school operations." Even the task of how to engage with stakeholders surfaced. One student said she learned "How to handle difficult situations with parents and staff. Also, the application of the topics I was learning in my classes." The specific skills were numerous but were all part of managing a school.

Effective Communication Skills

The second most frequently cited theme was the development of effective communication skills to engage stakeholders to support the school's mission and vision. "I learned just how critical clear communication is to the culture and climate of the school" was followed by similar statements such as, "It's important to have a clear focus that is communicated regularly." Some coaching principals were "a model of great communication and human relation skills," as noted in the student's responses. Finally, aspiring leaders wrote that communication was essential "get buy-in to your vision."

Building Culture and Climate

The following skill instilled in the aspiring leaders was creating a campus culture conducive to a positive school climate. The importance of culture to student and school success was noted in responses such as, "I learned how to build culture and climate. I learned how the

culture could be negative if the administrator does not have a clear vision. I learned how to turn around the culture and climate to benefit students and the school community. It's based on strategic planning." Another student wrote, "Another disposition I learned is building relationships with staff members to have a positive climate and culture."

Building Relationships and Trust

Building relationships and trust was the fourth most noted learning area. The importance of building trust with faculty and staff was pointed out in the statement, "I learned that you have to make personal connections with your staff and make time to the walk the campus no matter how busy you may be," followed by learning to "be a good listener and build trust when you walk into a new building." Some mentors modeled this disposition, as supported by this student's observation: "Aside from her priority as an instructional leader, she spends much of her time on building relationships with students, teachers, and parents."

Organization and Time Management

The last skill, in order of frequency, was learning how organization and time management can help operate a school efficiently. Some responses to verify this outcome included learning "Managing time and completing tasks" and "How to prioritize between all of the different responsibilities." One student related his time management to working with his site-based administrator's schedule. The student wrote, "I learned to value time when approaching my administrator, and I learned to work without their guidance."

Conclusion

Based on the questionnaire results, the aspiring principals perceived mentors and coaches as highly significant to their development as school leaders in both aspiring principals' socialization and practice of their knowledge and skills. The open-ended questions produced themes confirming the same essential messages from both types of support, except for one theme. A higher average perceived value of the interaction with the shadowing mentors may be attributed to participants' shadowing these principals for three consecutive days during each of two semesters, in addition to the regular monthly group meetings. The mentoring activities facilitated the development of personal relationships where issues such as trust and career aspirations could be discussed and supported, in addition to helping connect the theory from the classroom to school experiences. These mentoring activities promote the socialization of the aspiring leaders into the profession and the district.

The site-based principals only met with the participants on an as-needed basis. In addition, the site-based principal was in an evaluative role over the participant, which may have created some discomfort in asking too many questions for fear of being perceived as incompetent or not knowledgeable. The experiences aligned to areas recognized as essential to practicing leadership knowledge and skills in the daily administrative tasks of school leaders.

The authors recommend including both mentoring and coaching as components of leadership preparation programs. By developing a mentoring and coaching support network,

graduates can be socialized into the district protocols by their mentors and improve their knowledge and skills through their coaches. The result can be better-prepared administrators with fewer obstacles to overcome and a higher sense of self-efficacy in leading a school.

Implications

School districts continue to find it challenging to recruit and retain effective principals, mainly in urban communities, which enroll much greater percentages of racial/ethnic minority students and students from poverty than rural and suburban districts (Crow & Whiteman, 2016; Gray, 2018; Wilson & Bloom, 2019; Goldring & Taie, 2018). Studies indicate that various states already require mentoring for new principals (Mitgang, 2012). Many school districts have developed academies to familiarize new administrators with local policies, structures, and programs in an attempt to ensure effective leadership for student success and school management (Mitgang, 2012). But why wait until an aspiring administrator is leading a school to begin the coaching and mentoring needed to prepare the leader for a smooth transition into an entry-level position as an administrator? Adequate preparation and induction for aspiring and early career school administrators can support their ability to manage the complexities of school leadership, increase school administrator retention, and improve administrators' practice (Alsbury & Hackmann, 2006; Orr & Orphanos, 2011). Mentoring and coaching both played essential roles in the preparation of the aspiring administrators in this partnership between a school district and a university leadership preparation program.

We contend that aspiring leaders need both types of support, mentoring for professional socialization, and career support and coaching to develop and reinforce specific leadership knowledge and skills. Mertz (2004) explains that the success of the protégé to advance in the organization is the end goal for a mentoring relationship, thereby focusing on the "future" and that mentoring requires deep physical and emotional involvement. As practiced by the site-based administrators, coaching served as an instructional aid in developing specific skills that could be assessed and improved in the present time. Both are necessary to develop and retain effective administrators. The mentors and coaches for this program were paid district principals who went through formal training for their roles in the partnership between the university and the school districts, which is essential to note. The training was to ensure specific expectations and goals for each role. Partnerships between school districts and universities have proven to aid in increasing the number of well-prepared school leaders (Crow & Whiteman, 2016; Gates, Baird, Master, & Chavez-Hererias, 2019; Orr & Orphanos, 2011). Principal preparation programs may use this research to reach out to school districts for similar support for their curricula. Partnering districts may also encourage the programs that develop their future leaders to include mentoring and coaching to begin the pseudo-induction process before leading a school. Socialization into the district processes can increase leader efficacy, retention, and student success. The complexity of the principalship can be ameliorated through a double support system such as the one in this study. Continued research is needed to support the findings from this study in other programs and districts.

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Using Mentor Voice to Inform Educational Leadership Preparation Program Clinical Practices

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The role of the principal in leading schools is vital to the success of the school. Mentors play a critical role in supporting educational leadership candidates during the clinical experience at the graduate level. This qualitative embedded single case design study explores the perceptions of mentors related to support from IHEs, collaboration, incentives, and challenges. This qualitative case study was conducted at one Midwestern IHE. Participants expressed that collaboration with IHEs, other mentors, and candidates was valuable and that they served as mentors to provide candidates with quality experiences in an effort to contribute to the development of educational leadership. Challenges were also reported and findings from the study offer educational leadership preparation programs pertinent information related to potential improvements in supports to mentors for graduate educational leadership programs.

Keywords: Mentor voice; educational leadership; clinical experience; case study

The role of the principal is complex and critical to successful and effective schools therefore, it is imperative that they receive high quality and effective training. A key part of this training is mentoring. Mentoring has long been considered a necessary part of developing educational leaders (Hayes, 2019; Swaminathan & Reed, 2020). In fact, extant literature emphasizes the crucial need for experiential learning for new and aspiring school leaders (Thessin & Clayton, 2012). For mentees, the mentoring experience has been linked to improvement in both the social and professional aspects of school leadership (Aravena, 2018). Sciarappa and Mason (2014), in a study exploring the perceived effectiveness of a mentoring program for principals from the principal's perspective, found that mentees experienced many professional successes such as developing relationships in the community and improving the atmosphere and environment of the school. Additionally, aspiring, new principals have noted the value of mentorship in their own development as leaders (Thessin & Clayton, 2012). Likewise, the National Association of Elementary School Principals (NAESP) places such importance on the mentoring of principals that they have developed a mentor training and certification program that aligns with their mentor training competencies and Professional Standards for Leaders (NAESP, 2020).

Literature Review

The literature on mentoring employs a variety of definitions and frameworks in which to view the idea of mentorship. In early studies on mentoring in schools, much of the literature discussed it as a transactional relationship where the mentor gives information to the mentee (Hayes, 2019; Hayes, 2020). However, the principal's role has evolved over time to one of leader of learning, and thus the components of quality mentorship have also evolved (Hayes, 2019). Thessin, Clayton, and Jamison (2020) contend that a key feature of a quality mentorship relationship is that both mentor and mentee learn and grow throughout the relationship, it is not one way. Hayes (2020) agrees and expands this conversation to include a discussion on a critical-constructivist approach to mentoring where knowledge and skills of both participants are discussed and constructed. Crisp and Cruz (2009), in their literature review on mentoring practices, noted the inconsistency of the definition of mentoring over time, but found that recent literature continues to agree on three fundamental areas that define mentoring. These components were first outlined by Jacobi (1991) and include that: (a) the mentoring relationship centers on the growth and achievement of the mentee and includes many ways to support it, (b) the relationship expands beyond just the work of the clinical experience but includes advice and assistance regarding such areas as employment, psychological support, and career growth, (c) and that the relationship is both mutual and personal (Crisp & Cruz, 2009).

There is a vast and varied amount of literature on effective mentoring practices; however, throughout the research there are common themes that inform best practices. Regarding mentoring practices in general, mentees should be fostered in developing their own leadership style that fits them and their school and is not necessarily the same as their mentor (Schechter & Firuz, 2015). Chikoko et al. (2014), in their study on leadership training for practicing school principals, found that employing an asset-based approach (focusing on the mentees strengths to build from) versus a deficit one (basing the mentorship on perceived weaknesses) yielded higher outcomes. The focus of the mentorship should include helping the mentee build their own

confidence as well as a growth mindset (Swaminathan & Reed, 2020). The development of mentees' ability to effectively communicate with a wide range of stakeholders is also a key outcome (Thessin & Clayton, 2012). Additional key factors for an effective mentorship experience include ensuring the mentees have chances to engage in actual leadership roles, that they are given a variety of schools, districts, and responsibilities to engage with, and there is a trust between mentor and mentee (Thessin & Clayton, 2012). Scott (2010) found mentors and mentees also noted the importance of time to communicate and resolve conflicts, that informal mentoring time was extremely valuable, and they valued and wanted more time for open-ended discussions with their mentors.

In terms of the mentorship process, Thessin, et al. (2020), found that there were common phases needed to put into place a strong mentoring relationship that are, "(a) establishing the partnership, (b) cultivating the mentoring relationship, and (c) learning through the leadership experience" (p. 37). After developing a full understanding of these phases, and mapping them to Knowles' principles of adult learning, Thessin et al. outlined the Educational Leadership Mentoring Framework (ELMF). Jamison et al. (2020), in their study on mentoring relationship development, noted that the relationships developed through these three phases too.

When considering formal programs such as principal preparation programs offered through institutions of higher education, a review of the literature outlines some common themes for best practices. Thessin et al. (2020) in a review of the literature on internship programs, found effective mentoring includes opportunities to engage in authentic leadership scenarios in order to practice taking risks, networking, self-reflecting, and providing feedback.

outlined three key factors for effective mentorship programs: choice and preparation of mentors, choice of mentees, and program evaluation. Clayton and Thessin's (2017) mixed methods study found the importance of consistency across the mentorships in programs and stated, "It is important for programs preparing educational leaders to work in tandem with school districts to ensure consistent experiences that acknowledge the leadership experiences the candidate already possesses when he/she begins" (p. 304). Training and preparation for both mentors and mentees was also noted as a key part of the success of these programs (Shapira-Lishchinsky, 2012).

In terms of preparation for the mentorship, training should be provided for the mentees (Clayton & Thessin, 2017) and should include practicing how to engage in difficult conversations (Clayton & Thessin, 2017). Dominguez and Hager (2013) emphasize the value on programs using matching strategies and evaluating mentoring partnerships for assessing quality of fit. Furthermore, it is recommended if the mentees can be involved in choosing their mentor (Chikoko et al., 2014; Oplatka & Lapidot, 2018), and should include considerations of "educational ideologies and philosophies, social values, types of school, school level, and common expectations from the 'correct' mentoring process" (Oplatka & Lapidot, 2018, p. 218). Additionally, Clayton et al. (2013) emphasize the benefits of providing mentors and mentees with a structure for their conversations.

Training and Supporting Mentors

Despite the array of literature and research on mentoring in the educational setting, there is scant research specifically on the mentor role in the relationship. However, from the little

research there is, mentors should bring specific skills, knowledge, and abilities to the mentoring relationship (Gumus & Bellibas, 2016; Riley, 2020). Clayton and Thessin (2017) contend that the role of the mentor must be clearly outlined and understood by all parties and that mentors understand how they will support and assess the mentees. A variety of publications note key atrributes of mentors. These characteristics include open-communication and shared goals for mutual learning (Thessin et al., 2020). Additionally, Jamison et al (2020) highlight key mentor requirements found in literature such as content knowledge, pedagogy, and familiarity with financial management. Mentors benefit from the mentoring relationship (Bickmore & Davenport, 2019; Hayes, 2019). Schechter and Firuz (2015) noted that mentors benefited through, "growth, a sense of self-satisfaction, and obtaining new ideas from the mentee" (p. 381). Finally, like the mentee, training should be provided for the mentors (Chikoko et al., 2014; Gimbel & Kefor, 2018). This training should focus on fostering the skills mentors need to be effective mentors and should be completed before the mentorship begins (Clayton et al., 2013).

While the value of training for principal mentors is clear, little research has been conducted on training for principal mentors and on exploring the mentor's thoughts on how to best support them in their role as mentors within a university administrative development program. Thus, this study explores the perceptions of educational leadership clinical experience mentors related to training, supports, challenge, and potential incentives to better understand and support them.

Conceptual Framework

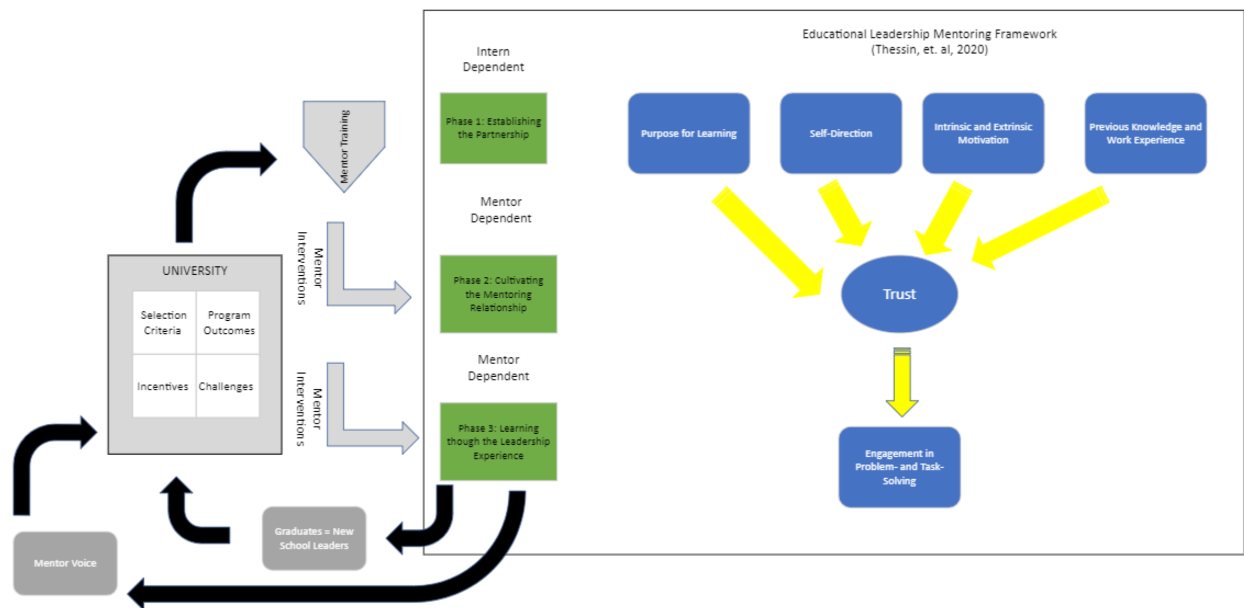
Administrative Preparation Programs hold a key role in developing quality clinical experience experiences, through intentional clinical experience design features and mentor selections. Stakeholders within such program, have a responsibility to collaborate with external partners to appropriately select, train, and support clinical experience mentors who will partner with candidates in their culminating clinical experience (Jamison et al., 2020).

In the ELMF, Thessin et al. (2020) connect Knowles theory of andragogy (adult learning) with the development of a trusting relationship between candidate and supervisor across three developmental stages of a clinical experience. In follow up studies of EMLF, they found the quality of the relationship between a mentor and mentee impacts the level of leadership opportunities candidates are provided during their clinical experience resultant from mentor perspectives on the quality of the candidate's readiness and preparation for the tasks (Jamison et al., 2020).

This research study explores the ways administrative preparation programs can better equip mentors for the critical roles of mentoring and preparing candidates. The conceptual framework of our study therefore builds upon the Educational Leadership Mentoring Framework (Thessin et al., 2020, p.50) with a focus on mentor's voice and IHE interventions for mentor development.

As demonstrated by Figure 1, the University's function as two-way intermediary is important to the mentors. A dual-direction intermediary, University faculty and staff are responsible for listening to inputs and perspectives of current leadership practitioners regarding programmatic decisions such as selection criteria, challenges, mentoring incentives, and program outcomes. Additionally, mentors require clear communication from university stakeholders on program expectations to and processes to address candidate needs.

Figure 1
Mentor and IHE Collaborative Engagement



Purpose and Research Questions

The purpose of this qualitative study was to explore the perceptions of clinical experience mentors in one educational leadership preparation program at one institution in the Midwestern US. More specifically, the relationship between an educational leadership preparation institution and mentors is considered in an effort to gain valuable information regarding supports provided to mentors, challenges of mentoring, and why mentors serve in the role of mentor. This study sought to address the following research questions:

1. In what ways can IHEs effectively support mentors to prepare educational leadership candidates?
2. What challenges do mentors experience and how could those challenges be addressed with specific supports from IHEs?
3. What are the primary reasons, such as incentives, that practitioners serve as mentors?

Methodology

According to Merriam and Tisdell (2016) "A case study is an in-depth description and analysis of a bounded system" (p. 37). Given that this study is primarily defined by the unit of analysis, a bounded system, a case study approach was employed. More specifically, an embedded single-case design (Yin, 2016) utilizing a focus group approach to provide deep insights and allow for group members to interact and build on responses was utilized. Given that IHEs often administer educational leadership clinical experiences in different ways, a single-case design was further justified by research to allow for the collection of specific data.

Data Collection

Sampling for this study included a purposeful (Creswell 2013; Yin, 2016), homogenous (Suri 2011) technique. Invitations to participate were sent via e-mail to a total of 62 potential participants. E-mail addresses were obtained from mentor contact lists ranging from Fall 2020 to Spring 2022. Of these, 11 were no longer valid e-mail addresses. Two reminders to participate were sent and participants indicated their willingness to participate in a short survey with data being collected in Qualtrics. The focus group participants consisted of three educational leaders in the state who have previously mentored one or more educational leadership candidates completing a certification program at the building or central office level. The focus group was conducted in approximately 60 minutes.

The focus group was conducted in April of 2022 with two researchers collecting data and asking questions. Researchers focused four focus group questions with some follow up based on the responses. The focus group was recorded electronically and transcribed and audited for accuracy by viewing the recording and updating the transcript to reflect statements made by participants. Participants in the study had previous experience mentoring at least one educational leadership candidate through completion of the clinical experience. The role of the mentor included collaborating with candidates to develop learning plans, mentor shadowing opportunities, supervising mentor activities, and performing an evaluation of the candidate aligned to the National Education Leadership Preparation (NELP) standards. Clinical experience activities were aligned directly to the NELP standards. Candidates completed a minimum of 240 hours during the clinical experience and worked regularly with mentors throughout the process. Mentors and candidates participated in a minimum of two meetings with IHE faculty to plan and review clinical experience activities. Mentors were not compensated for their mentor role by the IHE. The clinical experience included two primary meetings between the mentor, candidate, and faculty member including initial conference with the mentor and candidate to discuss the learning plan, and a final meeting at the conclusion of the clinical experience to review progress and ensure the candidate has met the requirements for completion. The IHE at which the clinical experience takes place serves educational leadership graduate candidates throughout the US and is delivered in a virtual environment. The program operates virtually with regards to interactions between the candidate, mentor, and faculty and includes mostly candidates from the state in which the IHE is located.

Professional roles for participants of the focus group included building and district level leadership and representation from a charter school. Data was collected until researchers were confident that saturation was achieved, and that no new information was forthcoming during the focus group (Merriam & Tisdell, 2016; Yin, 2016). Each participant provided information related to focus group questions and built on responses and examples from other participants.

Data Analysis

Merriam and Tisdale (2016) state that "Data analysis is a complex procedure that involves moving back and forth between concrete bits of data and abstract concepts, between inductive and deductive reasoning, between description and interpretation" (p. 202). Analysis began with an open coding process including all focus group data using a qualitative analysis software

including the disassembling and reassembling of the manuscript and applying codes to establish patterns. Open coding involved the use of researcher notes and the organization of data into initial codes. Initial coding included words and short phrases to identify main topics. This was followed by analytic or axial coding to organize patterns into categories and subcategories (Yin, 2016). According to Merriam and Tisdale (2016) "Categories are conceptual elements that 'cover' or span many individual examples (or bits or units of the data you previously identified) of the category" (p. 206). Analytic coding specifically involved reviewing the transcript through the lens of each initial code and reassembling data into codes more specific to the content while making note of excerpts that spanned across codes. This resulted in the changing of some root codes and child codes. The final step in data coding included the formation of final category codes (Yin, 2016). During this final step, codes and categories were reviewed and renamed as appropriate. Member checking was conducted by providing participants via e-mail with an electronic version of the results from the focus group including the main concepts developed from data analyses and direct quotes from participants. No changes were recommended by participants.

Positionality

The faculty researchers conducting this study work closely with clinical experiences as part of an Educator Preparation Provider (EPP) at the IHE. Capacity for the researchers include instructional, clinical experience development, and clinical experience supervision in initial and advanced programs. The focus group was conducted by both EPP faculty members.

Berger (2015) addresses reflexivity by stating that "The degree of researcher's personal familiarity with the experience of participants potentially impacts all phases of the research process, including recruitment of participants, collecting data via interviews and/or observations, analyzing and making meaning of the data, and drawing conclusions" (p. 229).

While it is difficult to fully mitigate reflexivity in case study focus group research, researchers employed measures during the process to minimize bias. For example, researchers prepared specific focus group questions and agreed to utilize the questions to drive the focus of inquiry with minimal straying or semi-structured questioning during the data collection process. Additionally, the relationship between researchers and participants revolves around supporting educational leadership candidates throughout the clinical experience. In other words, bias and reflexivity can be minimized through intentional efforts. One example that could be more susceptible to reflexivity or bias involves the collection of data related to challenges and role of IHEs in supporting mentors. In the case of this research, data on these concepts were intentionally solicited from participants to provide valuable insights for improvement of supports for mentors.

Findings

Collaboration and Support for Mentors

The first research question sought to investigate how IHEs can effectively support mentors to prepare educational leadership candidates during the clinical experience. A theme that emerged from the group of veteran mentors stressed the importance of clarity around expectations and responsibilities for the interns and mentors. To address this, participants shared

examples of potential resources such as informational electronic recordings, webinars, and documents that clearly articulate mentor’s role in the clinical experience and requirements for candidate completion of the clinical experience. In addition, participants shared a wealth of information related to collaboration.

Another significant theme to emerge from the data is collaboration between the mentor and candidate, as well as between mentors. While the mentor and candidate operate in a shared physical location, program faculty communicate with each virtually during the clinical experience. Participants expressed an interest in convening virtually and face to face (on-campus). Furthermore, mentors indicated that meeting face to face on campus would build a sense of collegiality among mentors, candidates, and faculty. One participant communicated this interest, offering availability to travel to campus. “You know, maybe a day, I would be more than willing to come to [institution] for a day with, with some colleagues that I'm working with and help sharpen their iron.”

An unexpected finding from this study involves participants expressing the benefit of building collegiality specific to candidates and mentors collaborating from charter and traditional school settings. Participants discussed the divide between charter and traditional school environments, and that there was value in candidates learning about each of these environments during the clinical experience. One participant conveyed the value of collegiality by stating:

> And I've asked for a long time, why do we have to be that way? Why? Why can't we just be more collegial? Because we're all here to serve kids and to educate kids. And, um, but I think from an administrative candidate standpoint, it's good for these candidates to know what their options are and what they may aspire to want to do. Because it isn't just being a superintendent in a public or a principal and the charter or, you know, in the virtual world.

Another participant added that beyond learning about the charter school environment, cyber schools added another opportunity for candidates to learn about multiple settings during the clinical experience. This was summarized by the statement:

> That's a great point. I agree being from the charter world, um, you kind of get very isolated in that charter world. And then us being the cyber charter are even more specialized. So, um, it would be good for the mentors to make sure that they're experiencing or hearing things from other environments.

Furthermore, at the crux of this idea, stressing learning from outside their current setting a participant added that “We only know a lot about the bubble that we live in every day and... outside the bubble there is a lot going on.” Participants also discussed unique relationships such as co-mentoring opportunities in which candidates could learn from other mentors and mentors could learn from each other. One participant reiterated the benefit of cross-collaboration between mentors asserting:

> I think something else that could be helpful as a mentor is just opportunities like this to see and meet other mentors. You know so, maybe we make those connections again early in that mentor mentee process. So, it just provides more people to reach out to. If you have a question, or if I wanted to reach out… and say, hey, what are you doing for your mentee or, you know, or how are you handling this?

The relationship between the mentor and candidate was reported as “unique” and participants shared that there is powerful learning and collaboration that takes place in the

absence of the mentor having a formal evaluator role. This allows the mentor to facilitate learning for the candidate in a different manner than as a direct report in a supervisory capacity. One participant articulates this benefit by stating:

> This mentor mentee situation is very non-threatening. I'm not evaluating, you know, so it allows me to focus more on professional learning and his growth and just again building that relationship. Um, I think it's just created a different dynamic between myself and a high school assistant principal than what might exist otherwise. I know him better than what I might usually know a high school assistant principal, and that's only going to help down the road, you know, for me and him as well.

Challenges

To address research question two, participants were asked about challenges and two main themes emerged including technical and timing challenges. First, the assessment management system in which mentors complete application materials, evaluate candidate work, and assess performance during the clinical experience was reported as having challenges. More specifically, accessing the system, logging in, and navigating the platform were challenging for mentors.

Second, the timing of the clinical experience course was reported as a challenge. More specifically, beginning the clinical experience in the fall (September) poses challenges for mentors. It was reported that educational leaders at the school and district levels have significant responsibilities during this time of year and that they would prefer a start date that would allow them to dedicate more time to working with candidates as opposed to when the demands of their administrative duties are not so demanding. Participants reported that August would be a more advantageous time to begin working with candidates since September is when leadership duties are more significant. One participant expressed this reporting "… September is just a hailstorm of busyiness and, you know, good busyness energy, starting the school year off right… I have a lot of time to prepare and plan and really reflect on certain things in August." Another participant reinforced this idea stating that "The timing of the delivery of the information is important… the month of August would be really nice to really ramp up." A third participant built on these sentiments and shared that:

> So, to piggy back off of that, and to reiterate the, the whole August piece… if you're streamlining the expectations, and you know who your mentee is, then during the time where kids aren't yet here, you can have some really good conversations that don't feel like well, it's just one more thing because you know, you're focused on the planning of the year and those sorts of things versus the implementation standpoint. So um, streamlining the expectations and then giving an appropriate amount of time for the mentor and mentee to get together, um, to really hatch what the focal points should be in the in the program during the year.

Incentives and Why Mentors Serve

Research question three sought to understand why participants served as mentors and what incentives could be provided to them as mentors. With regards to why they served as

mentors, participants reported that they felt it was important to share their expertise, support their staff in completing the educational leadership degree, and provide a quality experience. Furthermore, supporting the profession and contributing to the ongoing need for educational leaders was a motivator for mentors in this study. The importance of recognizing potential leadership within schools and districts and being able to support those potential leaders was expressed by all participants. One participant responded to why they agreed to serve as mentor by stating that "It was just an easy yes and kind of like my other colleagues said we're in the business of bettering humanity and bettering people one by one and the business of relationships." The quote resonates with much of what was articulated by participants stressing the importance of relationships and improving leadership by supporting aspiring school and district leaders. Another participant, who was also a completer of the program, provides additional insight by stating:

> I mean, we always just try to help others out, but having gone through the program myself, too, it was kind of a way to pay it forward. You know, somebody did this for me and gave me the experiences and exposure. So, it's good to be able to do that for somebody else. And kind of keep that, um, you know, chain going.

Overwhelmingly, participants reported the necessity to provide valuable experiences for candidates as the primary reason they served as mentors. The balance of pushing candidates to try new things and get outside of their comfort zone without burdening them too much resonated across participants. This involves "not just checking the box" and earning the degree but developing expertise and building confidence by participating firsthand in leadership activities that are new and unique. According to the group, learning new things and developing positive relationships is possible through the clinical experience given the collaborative nature of the relationship.

In terms of incentives, mentors reported that State Continuing Education Clock Hours would incentivize their participation due to their ease of accumulation. More specifically, being able to utilize these toward certification updates was reported as valuable. This was preferred over tuition reimbursement or other potential financial incentives. Participants also shared that providing more information to potential mentors to increase awareness of the commitment and expectations would be helpful in recruiting and incentivizing potential mentors.

Discussion

Findings from this study offer valuable feedback for decision-making in clinical experiences and educational leadership programming at large. This study builds on previous literature about the importance of mentoring and experiential learning for school leaders in training (Hayes, 2019; Swaminathan & Reed, 2020; Thessin & Clayton, 2012). This study is consistent with previous literature related to the importance of relationships (Bickmore & Davenport, 2019; Hayes, 2019) and the need for training and supports for mentors (Chikoko et al., 2014; Gimbel & Kefor, 2018; Clayton et al., 2013). This study also uncovered some innovative ideas about how IHEs can work with mentors to provide optimal experiences for candidates in educational leadership programs. This study affirms that mentors serve in the role to give back to the professions and contribute to the advancement of educational leadership. Findings related to collaboration cannot be understated. Participants stress the importance of collaboration and

provided concrete ideas for how IHEs can support mentors and provide collegial opportunities for mentors, candidates, and IHEs.

Challenges were expressed with some potential solutions offering practical insight for IHEs to consider. Clear information provided to mentors through one and two-way communication mechanisms also emerged as important considerations for IHEs. In addition, incentives revolved largely around developing leadership among candidates and continuing education opportunities toward certification renewal.

Implications for Practice

Findings from this study support the importance of IHEs providing a sufficient level of support for mentors through the development and deployment of informational items to provide a foundation of resources. These may include informational videos, recorded webinars, and documents to support mentors. Importantly, the expectations for candidates and mentors should be articulated clearly. This research also uncovered the importance of opportunities for collaboration between mentors, candidates, and IHEs. Participants stressed the importance of collaboration multiple times and clearly articulated a desire for more mentor-to-mentor interaction to learn from each other and provide candidates with a more vast clinical experience by leveraging the expertise of other mentors. It is also clear that mentors expressed an interest in participating in relevant activities with IHEs through virtual and face to face opportunities. These interactions should complement the provision of supports and resources. Furthermore, collaboration between the mentor and candidate is critical to the experience and forms the foundation for why participants serve in the role of mentor. These interactions are essential to the development of candidates and building leadership capacity within schools, districts, regions, and states. The power of the non-evaluative relationship between mentors and candidates can serve as a vehicle for mentoring educational leadership candidates in a unique manner that focuses on learning and improvement.

IHEs should also consider the timing of program implementation. As expressed by participants, September proves particularly challenging for devoting enough time to mentoring.

Limitations and Implications for Future Research

A significant challenge for this study was mentor availability. Given the demanding nature of educational leadership, finding time to collect data proved difficult. Additionally, a multiple-case study design could offer additional relevant data. Another limitation is that data were collected from mentors serving from one institution and data collected from multiple IHEs could expand the understanding of similar findings from additional perspectives. This could be particularly useful when paired with reporting of how the clinical experience is administered within different IHEs along with the level and types of supports and collaboration provided to mentors. Further quantitative research should also be considered to gain an understanding of the perceptions of mentors related to collaboration, considerations for IHEs, supports for mentors, and incentives. These quantitative data, paired with additional focus groups and interviews, may provide a more wholistic look at how IHEs can improve and support clinical experiences for mentors and candidates.

Conclusion

Qualitative findings from this study provide valuable information related to supporting mentors and candidates in advanced educational leadership preparation programs. Given the importance of educational leadership development, it is imperative that programs consciously support mentors and gather valuable feedback to inform programmatic decisions. Using intentional resource sharing, collaboration, and active partnerships with mentors, IHE faculty remain relevant and provide critical information, allowing programs to be responsive to ever-changing PK-12 educational environments and leadership demands.

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Perspectives on Teacher Leadership: Implications for Practice and Teacher Leadership Development

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Teacher leaders are valuable members of the school community. However, there is little existing research that explores how teacher leaders shape and enact their roles. In this article we explore how teacher leaders come to understand their role, as well as how principals and other school colleagues interact with teacher leaders and the ways in which those interactions support teacher leader role development. These findings have significant implications in helping us understand how to help teacher leaders develop in their role and the ways in which leaders can foster teacher leadership growth.

Keywords: teacher leadership, leadership development

Teachers who assume leadership roles within their school serve as key levers in the implementation of effective school improvement processes and in the establishment of a healthy school culture that put student learning and development first (Scribner, Hager, & Warne, 2002; Smylie & Eckert, 2017). Whether supported by formal school leadership or not, literature underscores the principal-teacher nexus that fosters teacher leadership in ways that positively influence school functioning and by extension students' experiences in those environments (e.g., Ogawa & Bossert, 1995). Ado (2016) argued that teacher leaders can fuel professional learning amongst colleagues that fosters "continued [professional] growth and ongoing [teacher] learning in schools and can help colleagues improve their teaching practice" (Ado, 2016, p. 3). However, while the importance of teacher leadership is not in doubt, we know less about 1) how teachers enact these roles or 2) how principals and other colleagues interact with teacher leaders to shape those roles and influence their potential impact. As such, this study explores teachers' and administrators' perspectives on the teacher leader role by asking the questions 1) how and in what ways do these actors understand the role of teacher leader and 2) what factors influence how and to what extent those roles are enacted in practice? We first provide brief overviews of how we have conceived the teacher leader role and the factors that influence those roles.

Teacher Leadership as a Role

While not a new concept, teacher leadership as a phenomenon has been considered along traditional lines (Brosky, 2011). York-Barr and Duke (2004) traced the development of conceptions of teacher leadership according to three waves. In the first wave, teacher leaders were considered those who served in formal roles, such as a department head, with a well-defined organizational mandate to increase the efficiency of school operations. Smylie and Denny (1990) observed that teachers in this first wave had "historically assumed certain formal leadership roles in schools and school districts," and that their leadership was viewed as a useful strategy to increase teacher efficacy and student achievement (Smylie & Denny, 1990, p. 237)—in other words, teacher leaders acted as an extension of formal leadership.

The second wave considered teacher leaders to include those appointed to roles that leveraged their instructional expertise to influence teaching and learning in the school context. For example, these roles included curriculum leaders, coaches, mentors, and specialists (York-Barr & Duke, 2004). Finally, the third and current wave encompasses the first two waves, as well as the teacher leader's critical role in school culture where teachers are leaders both in and out of the classroom (York-Barr & Duke, 2004). Cheng and Szeto (2016) contributed to our notions of teacher leadership in the third wave by expanding teacher leadership to comprise roles through which teacher leaders influence not only organizational initiatives but also other teachers' educational practices through less formal and planned interactions.

Factors Affecting Teacher Leaders

Teacher leadership, understood as a process through which teachers influence others in productive ways (Cheng & Szeto, 2016), occurs through interrelationships between school professionals that focus on issues related to school improvement generally and teacher practices more specifically (Brosky, 2011). Four organizational and contextual factors—school culture,

school structure, school leadership, and school-wide colleagues—have been found to limit or enhance the potential for teacher leaders to positively influence school environments.

Much has been written about how school cultures are shaped. State and district contexts, as well as teachers, administrators, and students play roles in determining school norms, beliefs, and practices. Here, however, we concern ourselves with how school contexts (i.e., cultures) shape teacher leadership. To that end, Swidler (1998) argued that just as individuals can shape organizational cultures, individuals' norms, beliefs, and values can be shaped by external forces at the macro-institutional, organizational, and dyadic/group levels of interaction. Schools are complex organizations situated within the broader institution can shape how teacher leaders engage in their work. For example, rules in the form of policies and procedures at the organizational and institutional levels can shape teacher leaders' perceptions of opportunities and constraints (Scribner & Bradley-Levine, 2010). Other institutional and organizational rules related to recruitment and selection, professional development, high stakes testing, and teacher evaluation, to name just a few, can all influence how teacher leaders envision and enact their positions. Yet, culture as a limiting factor is not preordained. School cultures—norms, beliefs, and values, can also maximize the positive impact of teacher leaders where those cultures encourage the devolution of leadership, promote collaboration, and reward teamwork (Teacher Leadership Exploratory Consortium, 2011).

School Structure

Beyond culture, organizational structures and routines influence teacher leadership (Smylie & Denny, 1990; Muijs & Harris, 2007). For example, schools that develop certain types of structures such as professional learning communities create opportunities for teachers to exercise leadership with or without formal leadership roles or titles (Scribner, Hager, & Warne, 2002). Further, schools with more organic collaborative structures, flatter interpretations of organizational hierarchies also tend to create more opportunities through which teacher leadership can thrive (Beachum & Denith, 2004). Ado (2016) found that putting in place structures that support "collaboration, teacher-driven, contextualized professional development, and reflective practice" are critical pieces to teacher leader development within a building" (p. 5). The structure of a school (time, recognition, authority, and support) can influence teachers becoming teacher leaders and carrying out their role. However, most schools are not structured to promote teacher leadership. In fact, most schools follow traditional hierarchical structures that limit teacher leader opportunities (Scribner, Hager, & Warne, 2002). In many instances, rather, teacher leadership is curtailed and cordoned off into certain areas acceptable to school leaders who operate within the traditional and hierarchical school structures (Silva et al, 2000; Struyve et al., 2014).

School Leaders and Shared Leadership

School administrator support for teacher leaders is vital to ensuring that these teachers can carry out their leadership roles (Teacher Leadership Exploratory Consortium, 2011). However, teacher leaders may find themselves in situations in which basic understanding of the role, or even trust between formal leaders and teacher leaders, are limited. This limit stems from

factors such as formal leaders' visions regarding teacher roles and institutional pressures such as achievement targets that make devolution of power to teachers an undue risk (Smylie & Brownlee-Conyers, 1992, p. 153). Therefore, the ways in which administrators shape this relationship and the conditions to support teacher leaders within their school can enable or hinder teacher leaders (Ado, 2016; Higgins & Bonne, 2011; Muijs & Harris, 2007; Silva et al., 2000). Thus, one necessary condition for teacher leadership within the institution and organization is shared leadership. Shared leadership by its nature requires formal leaders to relinquish some level of leadership control (Barth, 2001). Principals who hold tight to their power and status in the hierarchy, rather than embracing shared leadership, often become obstacles to it (Harris, 2005; Klein et al., 2018).

Teachers who exercise leadership are influenced at the dyadic and group level in multiple ways (Swidler, 1998). On one hand, these teacher leaders are often perceived as credible experts by their colleagues due to teacher leaders' expertise in the areas of teaching and learning and their understanding of classroom demands (Carver, 2016; Scribner & Bradley-Levine, 2018). Further, their acceptance as teacher leaders by their colleagues can solidify the teacher leader's identity as a leader (Struyve et al., 2014; Campbell et al, 2019).

On the other hand, teacher leaders may also encounter resistance from their peers (Carver, 2016). Tensions can arise when some teachers are given special roles and responsibilities, particularly when those roles and responsibilities exercise power over other teachers (Cheung, et. al, 2018). This "first among equals" ethos can act as a demotivator for teachers considering teacher leader roles due to strong norms of equality within teacher ranks (Carver, 2016; Cheung et al., 2018; Mangin & Stoelinga, 2011; Mevawalla & Hadley, 2012).

Methodology

A phenomenological perspective helps to understand how participants make sense of and interact with phenomena of interest in a study (Bogdan & Biklen, 2007; Laverty, 2003). As such, phenomenology guides how we implemented this study to better understand how teachers and administrators understand and experience teacher leadership (van Manen, 2014). We chose to study this phenomenon within one district, Bayside School District (a pseudonym). Bayside is a midsize urban school district in a mid-Atlantic state. Collectively, the 33 schools in the district serve approximately 20,000 students and employ approximately 1,500 teachers. Because we focused on teacher leadership at the elementary level our recruitment involved sending an email to all district elementary teachers and principals and assistant principals (approximately 400 employees). We identified 20 participants for the study (11 teacher leaders and 9 administrators). We selected these participants in a manner to ensure we represented teacher leaders and administrators from the same schools. Our participant selection created eight teacher leaders and administrator groups. We interviewed participants using semi-structured interviews and follow-up interviews as needed. Each interview was audio-recorded and transcribed verbatim.

In phenomenology, the researcher must allow the data to emerge by capturing "rich descriptions of phenomena and their settings" (Bentz & Shapiro, 1998, p. 104, as cited in Groenewald, 2004). Thus, data analysis began during the first round of interviews and followed the hermeneutic cycle of reading, reflective writing, and interpreting (Kafle, 2011). Throughout data analysis, we recorded coding choices, reflections, and memos as an integral part of analysis

and to compare analysis as we checked each other's interpretations to strengthen trustworthiness. As coding and categorizing developed, additional reflections were developed.

Findings

Through our research we identified two major categories. The first centers around the effects of the hierarchical school design on perceptions and possibilities of teacher leadership. And the second broadly addresses the impact of school culture and, especially, the nature of human relationships on teacher leadership.

Structural Effects of Hierarchy

Most US public schools are built on hierarchical personnel structures. Principals hold positional power and, as such, can influence decisions and processes in a way other personnel may not be able to do so. We found that the degree to which administrators adhered to a hierarchical structure influenced teachers' self-perception as leaders and affected their ability to exercise leadership in their roles.

Vertical Versus Flat Hierarchy: Principals' Perceptions Matter

When school hierarchy operated more vertically, we found that teachers' perspectives on their leadership was diminished. In short, vertical hierarchy led to teacher leaders generally experiencing their roles as implementers of someone else's (i.e., administrators) vision, goals, and directives. For example, one teacher leader shared that in her hierarchically-led school she carried out decisions that were already made. Another teacher leader from the same school described how even when she disagreed with administrator decisions, she felt she had no choice but to go along, "I was in that situation of wanting to say no, but of course it's not expected for you to say no; if you are asked to do something like this in our field, you know, it's never good to say no." Interestingly, the principal's perception of this school reinforced these comments when they stated, "…if I need them to do something, they've never said no."

Teachers in hierarchical leadership situations sensed pressure to conform to the requests from "higher ups" because they believed that they might not receive future opportunities if they did not comply. They saw administrators as "authority figures." Furthermore, teachers in these environments perceived their leadership opportunities as originating externally from school administrators. In other words, these teachers generally carried out the visions and goals of others but were less inclined to develop those ideas themselves.

We describe the nature of teacher leadership in these hierarchical schools as delegated leadership. That is, teacher leaders' leadership acts were guided by directives related to how to employ and enact the goals of others, rather than allowing them to determine, develop, and employ themselves. For example, one administrator, noted that at her school, leadership was often "granted and not sought out." Furthermore, teachers in these environments discussed how the leadership roles and responsibilities that administrators delegated went to only a select few teachers. Teachers in these situations expressed frustration because they believed that numerous other teachers were capable of the same responsibilities.

Teachers in schools whose principals lead in ways that suggested a flatter hierarchical perspective, described administrators who shared leadership with teachers and provided opportunities for teacher leaders to grow in their roles. For example, one of these principals explained how she recognized early in her administrative career that when administrators consistently select the same group of teacher leaders to carry out tasks the other teacher leaders and teachers identified as being in the "out group." She made it a point to consistently "look for ways to build leadership" in various areas, so it was not always the same group of teachers being given these opportunities.

Additionally, schools that had a flatter organizational structure showed evidence of high levels of collaboration between the administrator and teacher leaders. At these schools, teacher leaders seemed more comfortable seeking out opportunities and approaching administrators. Another administrator described how she recognized teacher leaders as those "who wanted to be there to help others as opposed to leading for themselves." Another teacher leader stated that "When my administrator notices a [teacher's] strength in an area she encourages [that teacher] to present ideas to staff. She also encourages teachers to take on additional leadership roles to help them to grow." Teachers at another school whose principal shared the "flat hierarchy' philosophy expressed similar sentiments about their administrators and how they encouraged and helped teachers grow as leaders and pushed them out of their "comfort zones."

Regardless of the leadership architecture—hierarchical or flat—teacher leaders clung to the idea that the power resides at the top of the hierarchy with the administrator. Of course, this makes sense for many reasons, particularly that administrators are charged with responsibilities that teachers are not. However, teachers' perceptions of themselves as pseudo-leaders creates a challenge for administrators who want teachers to exercise leadership. For example, administrators in our study who sought to share leadership described the challenge of changing teacher mindsets that leadership equated to bureaucratic authority assigned only to formal school leaders. One of these principals stated, "I'm not making them do stuff because I'm their boss, but because they're needed, and they're trusted and they're capable." However, the organizational hierarchy was evident in the teacher leaders' responses, such as saying the administrator is "still the boss" and feeling they had to "report to the right people."

Teacher leaders also expressed uncertainty with their role and where exactly they fell within the hierarchy of school leadership. One teacher stated, "I feel like there's this line of authority [that teachers should not cross]. But I don't know where it is." Another mentioned that the roles and responsibilities meted out to teacher leaders are not always clear and she feels "lost at times." This role uncertainty extended to how their role may change or fluctuate depending upon which administrator they interacted with, leaving teacher leaders unsure of what is expected of their role and how much they can do. Finally, within their role there was uncertainty as to how to interact with other colleagues. A third teacher stated, "I have uncertainty with this [aspect], just speaking to other colleagues on the same level as me from a different role, which is hard to do. And it's hard to break that barrier." This ambivalence toward leadership among teachers leads us to our next section on perceptions of authority and power.

Authority and Power: An Inherent Tension

Administrators suggested that teacher leaders were not always comfortable with some

of the leadership responsibilities they were offered because, as one principal stated, “there are also times when they don't feel comfortable...primarily because they're an equal with their peers.” She observed that this dynamic can be differ among teams and:

> they don't want to buck the system...they don't want to upset their colleagues. And so, they sometimes just go along with whatever's being said or done because they don't want to be the ones having to step into that role.

The interviews with teacher leaders revealed how much their role is influenced by the hierarchical nature of the school. In some cases where administrators had not empowered their teacher leaders, pushback and tension occurred between teacher leaders who did not have formal authority and teachers who viewed themselves on the same level. As one teacher leader stated,

> I think it is that lack of power because it's like, what makes anybody listen to me? And that was one of the things that bothered me those years that I was team lead, and I got all the pushback. So, I'm like, why would they listen to me? I am younger than them and I have less experience than three of them, you know? And so, it is what I can offer that builds their trust? Um, cause this is really hard to do without that power.

Another teacher leader described the challenges with teachers resisting what she tried to deliver. She stated:

> I've had challenges where with teachers something that came down and I have to share with the team ‘this is what we're going to do.’ And you do get resistance from the team. Usually for me, I just kind of let it go and share what I have to share, what we're going to do and kind of keep it positive instead of going back and forth. Because for me at the end of the day, we are all adults and professionals and I'm not making anyone do anything. This is what is expected of us to do.

The teacher leaders were rarely certain about where they fell within a leadership hierarchy. Another teacher leader stated, “I think a hindrance is the fear of having to address people who are on the same level ... as you in a different manner.” She shared that teachers and teacher leaders are viewed as colleagues and it can be difficult to provide feedback to someone that may be older and more experienced in terms of years of service. She continued;

> It's hard to walk in their room and be confident in saying, because you don't, I guess you don't hold the power that an administrator holds more like from colleague to colleague. People are afraid to give others on the same level feedback because they're afraid that people are going to look at them and say, well, why do you get to tell me what to do? You're no different than I am.

Ultimately, the teacher leader participants did not view themselves as a “step higher” than their colleagues. These teacher leaders largely understood that they would never have formal authority, nor did they seek it. However, the tension for teacher leaders working in schools guided by a flatter hierarchical perspective was more of a problem than for teachers in schools who were simply carrying out delegated tasks. Thus, the challenge of sharing leadership in meaningful ways was palpable in schools where principals attempted to truly share leadership.

The Human Element: Culture and Relationships

Both administrators and teachers described how culture and interactions between and

among these actors shaped the roles of teacher leaders. Administrator participants discussed the building culture as having an impact on the way teacher leaders engaged in their roles and how they grew into those roles. One principal discussed the critical importance of the administrative team establishing “an atmosphere where potential teacher leaders would feel comfortable with assuming responsibilities that would allow them to flourish.” In other cases, administrators had to build the culture into one that supported teacher leadership. Another principal shared that developing a positive culture conducive to cultivating teacher leadership was “a significant area of need for her school when she began as principal.” By consistently sharing leadership opportunities and supporting these teachers she argued that her school had developed a culture of collaboration among teacher leaders, grade level teams, and the school’s leadership team.

Consistent support of teacher leaders was another important factor. A third principal stated that “people being happy with where they work and [feeling] fulfilled leads them to doing more outside of the classroom.” An assistant principal described how it was important to build a culture in which the administrator is there “to support, to guide and help create an environment for [teacher leaders] to be successful.” She discussed, from her viewpoint as an assistant principal, how her “principal creates a culture that [she] believe[s] encourages leadership…[they] have a very open-door policy, which teachers use often.”

The teacher leaders also discussed how culture impacts their role and growth as teacher leaders. It was important for the teacher leaders to feel supported in a culture that empowered the teacher leader role. One teacher participant, for example, discussed how the culture of a school can either make you want to be a leader or not, “There are some times with the culture of the school that you don't want to be a leader.” Furthermore, teacher leaders emphasized the need for collaborative cultures that support the teacher-leader role. Another teacher leader described what collaboration looks like when she works with other teachers, “We all work together with the mindset of doing whatever it takes to help our students succeed...it has always been a building where collaboration is strongly pushed.”

Several teachers, however, suggested that even in their schools where leadership is shared with teachers that the collaboration needed for teacher leadership to root is often spread unevenly across their schools. One teacher described this phenomenon as “pockets of collaboration.” They shared that even where teacher leaders work well with others that other teachers and teams continue to work in isolation. They noted that the most dynamic and successful teacher leadership experiences are those where they are working collaboratively with others. But, here again, we noted a tension between teacher leadership and dynamic team collaborations and the potential for creating insider and marginalized groups. In this vein, a teacher leader discussed how the culture of collaboration needed to improve at her school because the teams were “very cliquey.”

Administrator-Teacher Leaders Relationships

The administrator participants all noted the challenge inherent in working with teacher leaders versus teachers who did not take on leadership responsibilities. From their perspective they experienced a tension like that of teachers described above. Several reasons for this tension were described by administrators in our study. For example, some administrators noted that the more frequent interactions they had with teacher leaders could inadvertently create a sense of

favoritism toward them. One principal put it this way, "there's a higher volume of interactions...with the people that are the leaders versus the others." Another indicated that these interactions often allowed for a chance for deeper conversations on important educational issues and more detailed explanation to the teacher leaders. He discussed how he would "go a little bit deeper for those teacher leaders because [he] would discuss the different variables related to the decisions that are going to be made."

Administrators also described how they tended to support teacher leaders in different ways because, for one, they often were the principal's first points of contact on school issues. Several principals discussed that they try to "consciously invest" in their teacher leaders and "push them to do things." One principal noted how she engages teacher leaders:

> On an individual level, building a relationship with them will encourage [trust]. When you get to know people, you discover more of what makes them tick and [that] can provide you with a greater insight into what their strengths are and what they are interested in doing.

The administrators also discussed how the relationship with the teacher leaders is different because of the nature of "confidential conversations" they have with them. The described having conversations with different and deeper levels of information than are had with other teachers, and thus further fostering a higher trust in their relationships.

Teacher leaders were also asked to describe their relationship with their administrators. In most cases, the relationships were described as positive and supportive. Most of the teacher leaders felt supported by their administrators and felt they could approach them with questions and concerns more easily than when they were a teacher. For instance, a teacher leader stated:

> I feel like I can go back and ask more questions than I could when I was not a teacher leader, or it was kind of like a cut and dry, like, you know, like a hierarchy. Um, and I wouldn't say, I feel like I'm equal with the administrators, but I feel like there's a lot more of conversation that could flow back and forth in that role.

Another teacher leader described her relationship with her administrator as a positive one in which she felt treated like an equal and that her ideas really mattered. She stated, "I feel like it's a very healthy, productive relationship. It's friendly. It has healthy boundaries and is very equal even though I respect that she's the ultimate decision maker. The relationship feels very equal."

Teacher Leader-Teacher Interactions

In this final section we explore teacher leaders' and administrators' perspectives on the nature of teacher leader relationships with their colleagues. Teacher leaders in our study believed that they were expected to work with their colleagues to support school improvement and success efforts.

Teacher Leaders as Respected Colleagues and Role Models

In most of the schools, administrators discussed how the teacher leaders were respected and looked up to as role models. Ultimately, administrators believed they chose effective teachers who "had something to share," which is why they were chosen for leadership roles in the first place. For example, one principal believed it was important as an administrator to put

someone in a leadership position that had credibility and served as a role model and in this way avoid potential pushback from colleagues. She stated:

> If you have a teacher that's struggling, and you try and put them in a leadership position...it kind of puts you in a tough position. Because if they're not really that strong of a teacher and people look at them, like, "I know that they're not very good." They're not really a model that someone would look up to.

Another administrator also said her administrative team keeps in mind how their teacher leaders are perceived by their colleagues when assigning leadership responsibilities. She stated, "They have to be respected and be able to communicate reasonably ... those are important factors." In those schools with a mostly positive perception and response to teacher leadership, the administrators discussed how teachers look to the teacher leaders for answers and said they are respected for their "competence and confidence." The teacher leaders at these schools tended to focus on school-wide issues, which in turn earned the teacher leaders respect from other teachers. One principal put it this way, "The other teachers then realize that what was being rolled out was not just 'another thing' but was connected to the work that was happening at the school level."

Most of the participants believed their colleagues respected them as teacher leaders. They attributed this respect to the relationships they had built among administrators and teachers. One teacher leader discussed how her relationships with administrators had empowered her as a leader among her colleagues. She stated, "my principal has made it really clear what is our lane. Because she has empowered us as teacher leaders, there's less conflict when we're operating in our leadership role." Another teacher spoke to the relationships she had developed among her grade level team and throughout the building, through which she sensed a level of respect and trust from her colleagues. And another teacher leader mentioned how her colleagues listen to her ideas and seek her out for advice. Finally, one teacher leader spoke to how her colleagues helped her develop into her role:

> I started teaching for the district with two really strong individuals on my grade level...that helped me because they were good teacher leaders. So that showed me that there was an opportunity to be a teacher leader within the building and within the district.

Competition and Jealousy

However, our data did surface tensions between colleagues. The schools that indicated a negative response to teacher leadership or the teacher leadership role attributed negative responses to jealousy and a sense of competition. One administrator discussed how other teachers do not really like the teacher leaders and she believed it was due to jealousy. She mentioned that the teacher leaders "get a lot of pushback from teachers who want to be in the forefront, and they want to lead." She went on to say that "when you have a teacher leader, they think that that person's going to rise above them. And so, the competition is real." Another administrator noted both positive and negative responses to teacher leaders and she also believed that the negative responses and pushback stemmed from "jealousy...because they would like to be the one with the information to be able to hear." In addition, several of the administrators noted that asking the same people to carry out leadership tasks or asking someone newer to the building resulted in other teachers becoming frustrated because they feel

like they should take on those roles or responsibilities because they have been there the longest.

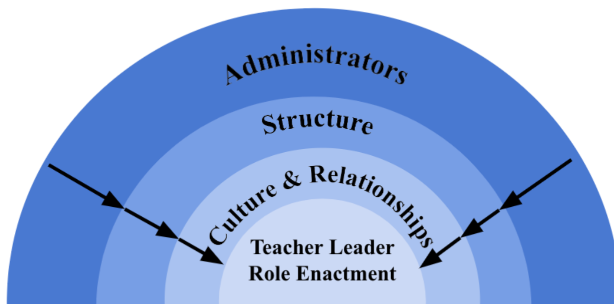
Several of the teacher leaders also discussed an occasional negative response to their role, which they attributed to jealousy or a sense of competition. One participant mentioned that teacher leaders often take on more than one role or responsibility and this can cause colleagues to view them as a "teacher's pet," but believed that "this is mainly because they are not looking at it through the leadership lens." Another teacher leader noted, "I'm sure that for some of my leadership roles, maybe they're like, 'Why am I not getting that chance?'...There's always going to be a few teachers that don't see you as a teacher leader." While another observed, "It just seems like some people take things personally. And I don't know, like some of it is probably jealousy—maybe they don't know why I have a leg to stand on. And so, there's no respect there."

Discussion and Implications

The purpose of this study was to understand from the perspective of teacher leaders and administrators how teacher leaders experience their roles. We found 2 major elements affecting teacher leader work: hierarchy and human factors (culture and relationships). Leveraging our teacher leadership lens, we can take away several important insights.

Figure 1

Organizational Influences on Teacher Leader Roles



The organizational hierarchy present at the various elementary schools leaves the power at the top with the administrator. At all the elementary schools in the study, the administrator was the one who appointed the teacher leaders to formal positions, such as members of the leadership team, grade level chairs, instructional leaders, and teacher mentors. Likewise, the administrator was the one who tasked the selected teacher leaders with additional responsibilities, such as leading school professional development sessions. Therefore, the teacher leader participants had to broker their own influence by relying on their expertise and relationships to both attain the role and to be effective in it.

However, for teacher leaders to be as impactful as possible it appears that administrators must be willing to share leadership and build a culture and structure that supports collaboration and allows teacher leader-teacher relationships to form. In addition, the culture and structure that administrators established needs to be one that supports teacher leadership, provides opportunities, and empowers teacher leaders. For those administrators who held on tight to their authority, the culture and structures failed to foster collaboration or teacher relationships

between teacher leaders and teachers. These contexts, in turn, created tension and pushback, leaving teacher leaders to be less influential.

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