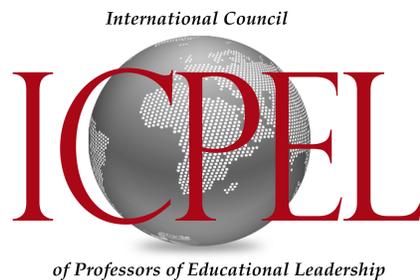


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The International Journal of Educational Leadership Preparation is a nationally refereed journal published annually in the Spring by the International Council of Professors of Educational Leadership.

Note from ICPEL Publications Director, Brad Bizzell

The International Journal of Educational Leadership Preparation is ICPEL's contribution to the Open Education Resources (OER) movement. This contribution to OER will be permanent.

In August, 2005, NCPEA¹ partnered with Rice University and the Connexions Project, to publish our IJELP as open and free to all who had access to the Internet. The purpose of the NCPEA/Knowledge Base Connexions Project was to "add to the knowledge base of the educational administration profession" and "aid in the improvement of administrative theory and practice, as well as administrative preparation programs." Our partnership continues but a new door opened for NCPEA Publications to join the OER movement in a more substantive and direct way. In March 2013, NCPEA Publications and the NCPEA Executive Board committed the IJELP to the OER movement.

What are Open Educational Resources (OER)?

Open Educational Resources (OER) are teaching and learning materials that you may freely use, adapt and reuse, without charge. Open Educational Resources are different from other resources an educator may use in that OER have been given limited licensing rights. That means they have been authored or created by an individual or organization that chooses to provide access to all, at no charge. ICPEL Publications is committed to providing access to all, while assuring author/s of full attribution as others use the material.

The worldwide OER movement is rooted in the idea that equitable access to high-quality education is a global imperative. To ICPEL, this is a moral/ethical responsibility and issue of social justice. Open Educational Resources offer opportunities for systemic change in teaching and learning through accessible content, and importantly, through embedding participatory processes and effective technologies for engaging with learning. The OER Commons project aims to grow a sustainable culture of sharing among educators at all levels.

What is the OER Commons?

The Institute for the Study of Knowledge in Education (ISKME) created OER Commons, publicly launched in February 2007, to provide support for, build, and make available to all, a knowledge base around the use and reuse of open educational resources (OER). As a network for teaching and learning materials, the web site offers engagement with resources in the form of social bookmarking, tagging, rating, and reviewing. OER Commons has forged alliances with over 120 major content partners to provide a single point of access through which educators and learners can search across collections to access thousands of items, find and provide descriptive information about each resource, and retrieve the ones they need. By being "open," these resources are publicly available for all to use.

¹ In 2018 the National Council of Professors of Educational Administration changed its name to the International Council of Professors of Educational Leadership

What ICPEL OER is Not!

ICPEL open educational resources are not an open door at the ICPEL Publications submission and review stages. We have always insisted on and will continue to require very thorough peer reviews (double-blind). ICPEL Publications is fortunate to have a cadre of professional reviewers (university professors), numbering over 300. Editors first consider a submitted manuscript, and if appropriate, selects/assigns two reviewers who also have the expertise/interest in the manuscript's specific topic. This process assures that reviewers will read an author's manuscript with expertise/experience in that area.

The "openness" of the IJELP OER comes at publication stage. Once the issues are published, they are formatted/published in an open access website, indexed by Education Resources Information Center (ERIC), catalogued as a "commendable journal" in the Cabell's Directory, and provided to the Open Educational Resource database. The IJELP is currently viewed and read by educators from over 72 countries and all 50 U.S. States (data provided by Google Analytics).

Read More at: <http://www.oercommons.org>

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The manuscripts in Volume 15, Number 1 (Spring 2020) 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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Changing the Mindset from Practitioner to Scholarly Practitioner: Admission through the First Two Semesters of an EdD Program

This manuscript has been peer-reviewed, accepted, and endorsed by the International Council of Professors of Educational Leadership (ICPEL) as a significant contribution to the scholarship and practice of school administration and K-12 education.



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The Doctor of Education (EdD) in Educational Leadership at East Carolina University incorporated advising into the admissions process through the first two semesters of the program. This study examined how, through the first year of implementation of this process, student knowledge of the role of the scholarly practitioner evolved from pre-admission advising through the second semester of this CPED-influenced EdD program. CPED is the Carnegie Project for the Educational Doctorate, a consortium of colleges of education which aims to prepare scholarly practitioners to solve problems of practice through the lens of equity, ethics, and social justice (CPED, 2009; Hoffman & Perry, 2016). The study describes how faculty utilized the Model of Improvement framework with three Plan-Do-Study-Act cycles to intentionally teach this concept. The results of this study indicated that there was a mindset change for students from practitioners to scholarly practitioners. Accordingly, the findings herein may be beneficial to educational leadership doctoral programs in replicating the program's successes with growing practitioners into scholarly practitioners through embedded activities from admission through early coursework.

Keywords: scholarly practitioner, PDSA cycle, problem of practice, educational doctorate

This article describes ways to incorporate advising beginning with the admission process and through the first two semesters in a Doctor of Education (EdD) program for students to develop the knowledge and skills needed to be scholarly practitioners. The EdD program in this study is a member of the Carnegie Project for the Educational Doctorate (CPED). The goal of CPED is to prepare scholarly practitioners to solve problems of practice, and they do so by framing solutions through the lens of equity, ethics, and social justice (CPED, 2009; Hoffman & Perry, 2016). Shulman, Golde, Bueschel, and Garabedian (2006) described the key indicators of EdD programs as the use of signature pedagogies, requiring practice-related research skills, expecting students to be engaged in continued research, and suggesting that program participants will develop skills to conduct local research and evaluations to guide practice at their institutions.

Students who enter EdD programs, such as the one in this study, are experienced practitioners in educational leadership and do not view themselves as researchers (Buss, Zambo, Zambo & Williams, 2014). According to the Council of Graduate Schools (2007), a professional doctoral degree should represent preparation for the potential transformation of a field of professional practice, just as a PhD represents preparation for the potential transformation of basic knowledge in a discipline. CPED indicates that scholarly practitioners use practical knowledge and professional skills to name, frame, and solve problems of practice. Recognizing the importance of equity and social justice, scholarly practitioners utilize research and theories as tools to help disseminate their work. They feel an obligation to resolve the identified problems of practice by collaborating with key stakeholders, including the university, the schools, the community, and individuals (Perry, 2015; Stark 2019).

The EdD program in this study joined CPED in 2014. This CPED influenced EdD utilizes meaningful and interactive activities that engage students to view themselves as valued practitioners who own their doctoral studies and experiences. These experiences begin with the admission process, especially at admission interviews where EdD program faculty engage students in self-reflection and self-identification of their role as scholarly practitioners.

The traditional apprentice model has been replaced by a more egalitarian and communal one, in which faculty and students collaborate in learning. In most cases, group advising has become a more manageable way to work with a larger number of EdD candidates (Perry, 2015).

Additionally, many programs are utilizing the cohort model to meet the needs of the students. This model helps students build support systems and the collaborative nature of the program teaches them how to deal with difficult situations and nurture close, beneficial relationships (Mansfield & Stacy, 2017).

Scholarly Practitioner Tenets at ECU

In considering the purposes of the EdD program, the intentional development of scholarly practitioners, and the importance of advising and collaboration, the faculty affiliated with the EdD program at East Carolina University (ECU) identified four main tenets to define the scholarly practitioner: research, leadership, practitioner, and social justice. The review of literature will develop these tenets.

Research

The research a scholarly practitioner conducts refers to the research-based knowledge and skills a practitioner needs to enhance their practice. Levine (2005) criticized EdD programs for the lack of

preparation and poor skills to conduct research relevant to the educational improvements connected to EdD students' practice. Levine also asserted that scholarship in these EdD programs must be connected to practice to effectively prepare leaders. Practitioners in the EdD at ECU are adept at leading but lack knowledge about research concepts and processes. For this reason, practitioners entering EdD programs need a clear understanding of education research. Showing practitioners the similarities and differences between education and scientific research helps clarify their knowledge of research expectation.

In addition to research connected to practice, research in EdD programs influenced by CPED teaches practitioners to utilize rigorous, sophisticated, and relevant research methodologies (Hoffman & Perry, 2016; Levine, 2005; Shulman et al., 2006). The EdD program at ECU subscribes to continuous improvement methodologies that encourage practitioners to conduct research over a period of three years utilizing methodologies that allow several iterations or cycles of research where each cycle is informed by data and reflections about the data on practice. The Model of Improvement (Langley, Moen, Nolan, Nolan, Norman, & Provost, 2009) is one such framework utilized by practitioners for studying cyclical improvement efforts.

Another methodology commonly utilized in education research and taught in EdD programs that are influenced by the CPED model is action research. The process of action research involves five sequential steps (Sagor, 1992): (a) problem formulation, (b) data collection, (c) data analysis, (d) findings, and (e) action planning. One EdD program conducted a study to examine their students' perceptions of themselves as learners, leaders, and action researchers. The students in the program utilized action research as their signature pedagogy for research. The results of the study indicated their students identified themselves as scholarly and influential practitioners (Buss et al., 2014). In this same study, EdD students conducted action research for a two-and-one-half year period. During this time students utilized various research methodologies that resulted in rigorous education research.

For scholarly practitioners research and writing the dissertation are two areas that need advising and support. These processes are very different for a practitioner and require many opportunities to change their mindset of practitioner to scholar and to balance their professional, personal, and educational demands (Klocko, Marshall, & Davidson, 2015). Practitioners often tend to address their scholarly work as an application of theory to practice. This is ideally the goal; however, many students in the EdD program at ECU tend to quickly act and solve problems and by doing so may fail to address the root of a problem.

Leadership

The CPED-influenced EdD prepares leaders who can construct and apply knowledge to make a positive difference in the lives of individuals, families, organizations, and communities. The programs also provide opportunities for candidates to develop and demonstrate collaboration and communication skills, to work with diverse communities, and to build partnerships (Boyce, 2012; Stark, 2019). As leaders, EdD students learn to be change agents who work to improve the lives of those in their communities using inquiry strategies to inform the process (Belzer & Ryan, 2013; Stark, 2019). Students are prepared to lead complex organizations, while attempting to provide students of all backgrounds with equitable access and success in rigorous educational opportunities (Peterson, 2017).

If the goal of an EdD program is to prepare social justice leaders skilled at reducing educational disparities, the focus of the program must move away from the standard technical

aspects of educational leadership. Focusing only on the standard technical aspects perpetuates the inequities in schools by ignoring the individual communities and their culture. A critical characteristic of social justice leaders involves becoming skilled in leading processes that create the space for hearing the voices of and including the perspectives of all members of the community in decisions is a critical characteristic of social justice leaders (Peterson, 2017).

Practitioner

The literature refers to a movement from subject-centered pedagogy, where subject information is taught by an expert, to learner centered andragogy, where active teaching and learning processes emphasize teaching the learner about the content (Buss, 2019; Forrest & Peterson, 2006; Long, 2018). Therefore, leadership preparation programs are more “focused on collaborative research and communities of learning, where critical thinking, authentic learning, and real-world application are key” (Mansfield, & Stacy, 2017, p. 303). Faculty and advisors in the EdD program at ECU strive to develop practitioners to value feedback, collaborate with communities, and to think creatively.

Practitioners in EdD programs influenced by CPED are typically part-time students who maintain full-time professional roles as they engage in their studies. The practical experience practitioners bring to their EdD programs makes them valued partners in the dissertation study thus changing their mindset from mere students in the program to a program that stimulates their professional growth.

EdD students have difficulty meeting the writing expectations associated with writing a dissertation. One factor is that as practitioners they have not developed their writing skills in the dissertation style simply because their roles do not require this skill (Ferguson, 2009; Long, 2018). Often students write as they speak, and not in academic language. As a result, many EdD students are unsure of their writing skills and misunderstand faculty feedback. In a study conducted by Klocko et al. (2015) beliefs about their critical writing expectations and stressors of practitioner-scholars in a Midwestern state were examined. The findings of this study indicated that practitioner students have difficulty using writing time efficiently, organizing writing projects, and displayed high levels of emotional stress related to writing to be critiqued. Faculty must begin enhancing writing skills and providing strategies for success as early as orientation (Klocko et al., 2015).

Social Justice

In 2007, CPED was launched as a response to the criticism of the purpose and rigor of the EdD program. CPED consortium members articulated principles to guide the implementation and direction of the program across institutions. Many of the principles focus on issues of social justice and educational equity related to the EdD program, including framing the program around questions of equity, ethics, and social justice to bring about solutions to complex problems of practice (Boyce, 2012; CPED, 2009; Perry & Abruzzo, 2020).

Peterson (2017) defines social justice as an orientation that includes both a goal and a process, whereby the dignity of each person’s identity is respected and enhanced. Social justice leaders ensure each person thrives as a learner and member of the community, whose perspective is considered. CPED-inspired EdD programs must serve as places where social justice leaders are prepared to interrupt systemic inequities in schools.

Methodology

The researchers of this study, in their efforts to continually improve the EdD program for their students, sought to gain greater insight into student knowledge and understanding of the role of a scholarly practitioner as they began their immersion into a CPED-influenced EdD program at ECU. As such, the resulting research question for this study asked how did student knowledge of a scholarly practitioner evolve from pre-admission advising through the second semester of a CPED-influenced EdD program? To address this research question, the researchers determined that data would need to be collected at different points in time to assess students' baseline knowledge and then the changes in knowledge through time. In addition, this study needed to study the effects of faculty efforts and involvement in this process. The researchers studied minutes and field notes from discussions the faculty had throughout the various planning and data analysis sessions.

The Model of Improvement (Langley et al., 2009) was utilized as a framework for the development and implementation of this study (see Figure 1). To answer the research question with this framework, the researchers utilized subquestions to guide various Plan-Do-Study-Act (PDSA) cycles. Langley et al. (2009) describe the PDSA cycle as a tool to be used to turn ideas into action and connect action to learning. Each of the subquestions were developed during collaborative discussions among the EdD faculty. The first subquestion was: *How did student knowledge of a scholarly practitioner evolve from pre-admission advising through the second semester of a CPED-influenced EdD program?* In other words were they able to change the mindset of students from practitioners to scholarly practitioners. The next question in the Model of Improvement was: *How will we know that a change is an improvement?* For this second question the research about the scholarly practitioner and the CPED framework provided the convincing arguments that changing the mindset would lead to improvement. Therefore, the third Model of Improvement question was: *What change can we make that will result in improvement?* The researchers designed three PDSA cycles that built upon the previous to provide increasingly greater depth of insight in the research question. The PDSA cycles helped assess changes made and if those changes resulted in mindset changes towards scholarly practitioners.

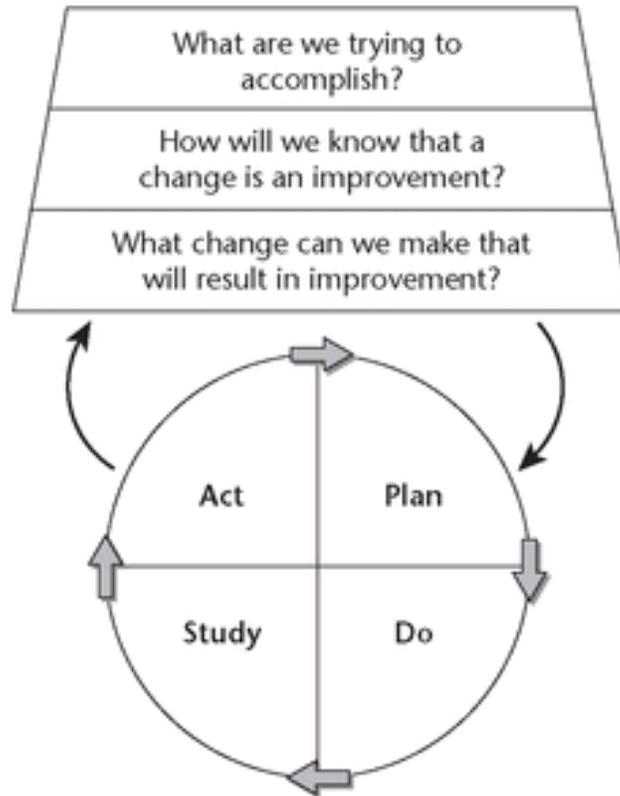


Figure 1. The Plan-Do-Study-Act Cycle (Langley et al., 2009).

Data Analysis and Findings

The findings of this study were intended to provide a more thorough understanding of the development of students in their conceptualization of scholarly practitioners within a CPED-influenced doctoral program. Faculty analyzed the data collected from 75 interviewed program applicants (Cycle 1) and the resulting 52 admitted students (Cycles 2 and 3) to examine patterns of responses. The 3 PDSA cycles of this study occurred over the course of a calendar year 2018-2019. The results of each cycle provided the foundation for the subsequent cycle, in alignment with the PDSA model.

PDSA Cycle 1 – Admission and Advising

Plan. Faculty met regularly to plan the admission process, to determine ways to advise applicants about the tenets of the EdD program, and to incorporate advising regarding development as scholarly practitioners. Faculty developed an advising-enhanced interview protocol where groups of applicants engaged in a collaborative manner through various exercises. The exercises were group advising, individual interviews with faculty doing the advising, group discussion around a scholarly article grounded in equity and social justice, a team challenge to gauge interpersonal, leadership skills, and creative skills, and a final reflection opportunity. Advising was infused into each activity within a three-hour period in the following ways:

Group advising. All applicants were present in this session with many faculty from the program. In this group advising, applicants were provided an overview of the program philosophy

and a preview of the applicant criteria that faculty were trying to assess. These qualities align with the tenets of the EdD and the faculty's definition of a scholarly practitioner. These were: commitment to improving own professional skills, commitment to lead through service, potential to complete a problem of practice dissertation, professional demeanor, creative problem solving through the lens of equity and social justice and, ability to establish respectful relationships. The faculty compared the EdD program to running a marathon and indicated the major milestones along the way.

Individual advising with faculty (interview). Faculty developed a list of interview questions that would lend themselves to advising applicants, while gathering information regarding their fit in the program. Sample questions that faculty developed included: (a) Is there a specific program of practice related to equity or social justice at your educational institution that you may be interested in pursuing? (b) Share a time when you made a mistake, and someone gave you feedback. What did you do with the feedback? What did you learn about yourself? (c) How would you describe the level of support you have from your current administrators for your enrollment in this EdD program and your pursuit of a problem of practice dissertation?

Group article discussion. Applicants were sent an article prior to the interview to read and be prepared to discuss at the interview. Faculty chose an article that presented a study about an equity issue in education. At the interview, applicants in groups participated in a group discussion where two faculty posed questions for applicants to ponder and discuss. Sample discussion questions were: (a) How do we as educational leaders overcome issues related to stereotypes to be effective leaders and good role models? (b) Can you think of a situation where you initiated critical conversations? What was your strategy?

Team challenge. Applicants in groups engaged in a team challenge activity where they were provided random objects and asked to create a story/statement focusing on social justice and equity in education. There were no restrictions or requirements related to the content of the story, other than it must use all the objects provided, and it must focus on the topic. Faculty observers collected data on ways applicants contributed to the challenge in meaningful ways, professional demeanor, interpersonal skills, feedback, and communication skills.

Reflection at the end (ticket out the door). Applicants completed a written feedback form anonymously where they reflected about the interview process by responding to the following sentence starters:

- I came expecting...
- I learned...
- What excites me about the EdD...
- What concerns me about the EdD...

Do. Applicant interviews were conducted Spring semester 2018 utilizing the various activities described in the previous, Plan, section. Faculty screened all 150 applications to select the applicants to be interviewed. The application materials that were reviewed for each applicant included a resume, letters of recommendation, the applicant's personal statement about why the EdD at ECU fits their professional goals, and a written response to an educational leadership prompt, Faculty reviewed the application materials utilizing the following criteria: a) professional experiences such as skills, title or role, years of experience, and types of leadership experiences; b) academic experiences and qualifications outlined by ECU's Graduate School; c) writing skills that clearly communicated ideas, articulated a coherent, persuasive, and well organized argument; d) leadership potential; e) alignment of applicant's professional goals with the EdD's program;

and f) a written response relevant to an issue of educational equity. Faculty selected 75 applicants from the applicant pool to interview.

The selected 75 applicants were interviewed on four different days with various activities planned by the faculty. Candidates completed three activities during their interview time. The purpose of the activities was to determine the applicants' interpersonal and communication skills, collaboration skills, critical thinking skills, and potential for action space to complete a problem of practice dissertation. One group activity was a discussion of a scholarly journal article about a study grounded on equity and social justice. A second activity was a group challenge to develop an educational statement about equity and social justice with objects that had no apparent relation to education or leadership. A third activity was an individual interview with an EdD faculty. All 75 applicants were provided the opportunity to complete a reflection at the end of the interview process utilizing the ticket out the door that is analyzed in the next section.

Study. The applicant responses were analyzed for the four main tenets of the EdD program (see Table 1) social justice, research, practitioner, and leadership. Of the 75 submissions, 43 interviewee responses had at least one response related to the four main tenets. Several interviewee reflections addressed multiple tenets. Responses were coded and grouped into the four tenets: Social Justice, Research, Practitioner, and Leadership. The implementation of the plans described in the previous section occurred Spring semester 2018. Faculty screened 150 applications to select the applicants to be interviewed. A total of 75 applicants were interviewed and advised on four different days with the various activities planned by the faculty. All 75 applicants were provided the opportunity to a reflection at the end of the interview process utilizing the ticket out the door described in the planning section of PDSA Cycle 1.

Table 1
Applicant Response Totals by Four Main EdD Program Tenets (Cycle 1)

EdD Program Tenets	Applicant Quotations
Social Justice	13
Research	8
Practitioner	18
Leadership	7

Responses to the informal assessment, the ticket out the door, indicated that applicants were most drawn to aspects of the EdD program related to the work of practitioners, with 18 of 46 included responses (39.1 %) noting such. Several responses listed below epitomize the feedback of the applicants who were intrigued by this tenet, stating that what excites them about the EdD is:

- “putting my research into practice.”
- “reading articles, writing papers, discussing real-life problems.”
- “the practical application of learning leadership.”
- “being able to investigate problems and potentially implement solutions in my building/district.”
- “to learn an approach to systematic problem solving.”

- “having another tool to serve my students and my community.”
- “it provides an opportunity for me to research and devise solutions to some of the issues facing my school/system.”
- “developing skills to solve current problems.”
- “using what I learn to make needed improvements to myself and the way my college operates.”
- “increasing my knowledge about educational leadership and passing that knowledge along to positively impact students.”

The confluence of continued practice as school leaders while having the opportunity to address problems of practice in the respective educational setting was an appealing aspect of the EdD program to applicant practitioners. This was their first initial exposure through the program into the work of scholarly practitioners and provided the foundation upon which further knowledge would be developed if admission was granted.

Social justice was another prominent response tenet for applicants. Of the 46 responses, 13 (28.2%) referred to their affinity for the EdD program having a focus on addressing issues of equity and social justice. When asked what excited them about the EdD, applicants made comments such as the ones listed below:

- “the opportunity to reflect on social justice and equity in K-20.”
- “collaborating to learn other points of view.”
- “the prospect of being able to develop globalized skills.”
- “learning more about diversity, as it is such an important factor in today’s global economy. I want to learn more about how I can prepare my staff and students.”

Responses for the areas of leadership and research were less prominent and indicated that additional instruction and exposure to these aspects of the program model were necessary.

Act. Based on the study of the various points of data during the interview process, 50 applicants of the 75 interviewees were admitted into the program. The selected 50 applicants demonstrated exceptionally high interpersonal and communications skills. These applicants showed positive and proactive collaboration skills while addressing problems with strong critical thinking skills. In addition, all selected applicants provided concrete examples to show that their current professional context would support their dissertation in practice by addressing a problem of practice. The selected applicants were selected to work on one of two Educational Leadership concentrations. Higher Education Administration students totaled 19 and PK-12 Administration students totaled 31. Of those admitted, 58% were Caucasian, 40% were African-America, and 2% were other. Seventy percent worked in rural settings and 64% were women.

The study of the applicants’ feedback indicated that advising during the admission process clearly explained how the program would help them become better practitioners by addressing real problems of practice. In addition, the interview process indicated that applicants understood that the problems of practice needed to address an issue of equity or social justice issue. Responses indicated that applicants needed more instruction and interaction with the tenets of research and leadership to help them grasp the meaning of scholarly practitioner. This would be the purpose of the planning activities for the PDSA Cycle 2.

PDSA Cycle 2 – First Semester in the EdD Program

Plan. Faculty met regularly to plan the learning outcomes and activities for the first semester courses. Such planning included developing meaningful ways to advise applicants about

the tenets of the EdD program, especially the tents of leadership and research that would lead to a better understanding of what was meant by the term scholarly practitioner. The plan for the students included reading research articles about scholarly practitioners, comparing researcher to scholarly practitioner, and starting to think about a problem of practice to tackle in the dissertation study.

Do. During the first semester of coursework, students were introduced to the topics of research and scholarly writing. During this period, faculty emphasized that they were experts in certain educational leadership topics and student were also considered experts in practical leadership experiences and skills. Students explored with their instructors the distinction between scholarly practitioners versus researchers. Readings included *The Role of Research in the Professional Doctorate* by Hochbein and Perry (2013). The students and professors thoroughly discussed the differences between a researcher and scholarly practitioner relative to the differences between PhD programs and EdD programs, as outlined in Table 2.

One of the differences highlighted was the purpose of the programs, where the PhD was described as attempting to fill a gap in the literature, add knowledge to the field, and contribute to growth of a theory, to name a few commonly purposes (Creswell & Creswell, 2018). In contrast, the purpose of scholarly work in ad EdD program is to address problems of practice and provide useful information to stakeholders to help make collaborative decisions around practitioner-based issues (Perry & Abruzzo, 2020; Stark, 2019; Young, 2006). The audience that reads and evaluates studies developed in a PhD program are researchers and academicians, compared to the audience that will read and benefit from the EdD study results, which include practitioners, stakeholders, and employers (Perry & Abruzzo, 2020; Schulman et al., 2006). Additionally, PhD researchers tend to explore and establish statistical causal relationships and study subject matter in depth compared to EdD scholarly practitioners who examine, implement solutions and innovations, and consider the impact of their work while engaging with a variety of stakeholders in interdisciplinary fields (Archbald, 2008). One additional aspect discussed was the

Table 2
Comparison and Contrast between Researcher and Scholarly Practitioner

	Researcher	Scholarly Practitioner
Purpose	Attempts to fill a gap in the literature, add knowledge to the field, contribute to growth of a theory	Address a problem of practice, provide useful information to stakeholders to help make decisions
Audience	Researchers or academicians	Practitioners, stakeholders, employees
Methods	Explore and establish causal relationships, depth in subject matter	Examine and describe to consider impact; interdisciplinary
Who sets the agenda?	Researcher	Stakeholders

Generalizability	Maximize	Relevant to the context of the study
Degree	PhD	EdD

generalizability of the studies. PhD studies try to utilize methodologies to maximize generalizability (Creswell & Creswell, 2018) while EdD studies concern themselves with findings that are relevant to the context of the study (Archbald, 2008; Shulman et al., 2006).

Near the completion of the summer semester, students were placed in groups and were asked to complete the following sentence starter by using their knowledge acquired through summer instruction in conjunction with their extensive practical experience: “Being a scholarly practitioner means...” The analysis of these sentence starters is explored in the next section.

Study. All 50 admitted students participated in this summative course activity whereby students were assigned to small groups to develop their own definition of what it meant to be a scholarly practitioner. The following four statements were voted by the students to most clearly capture their understanding of what it means to be a scholarly practitioner:

1. “reframing a problem in our work to support those we serve using research, best practices, and our own experiences.”
2. “using relevant research to guide decisions which will impact all stakeholders.”
3. “applying applicable research to one’s field to solve problems utilizing research-based best practices.”
4. “analyzing the information for deeper knowledge while applying it to your practice or problem of practice.”

Faculty reviewed the student responses and were satisfied that the instruction hitherto had adequately informed students on the role of the scholarly practitioner and the distinction between a scholarly practitioner and a researcher. This analysis was a formative assessment of the students’ knowledge about scholarly practitioner. Faculty decided that now that the students understood this concept the next step would be to help students understand how this knowledge would influence their approach to addressing a problem of practice.

Act. Faculty investigated ways for students, as scholarly practitioners, to use this knowledge to frame problems of practice. Faculty read research, consulted with other university professors in the CPED consortium, and collaborated to design the instructional and learning activities to be incorporated in the second semester of the EdD program.

PDSA Cycle 3 – Second Semester in the EdD Program

Plan. Faculty met regularly to plan instructional and learning activities for the second semester in the EdD program. One of the activities planned was centered on several discussion topics that would lead students to describe a problem of practice which they wanted to study and how the problem addressed issues of equity and social justice. These discussions also prompted students to consider the people affected by the problem and the stakeholders that should be involved in the study. Faculty planned an activity that helped students describe the differences between academically sound and not sound literature sources in an effort to guide their research strategies. Another activity involved helping students understand their writing strengths and weaknesses and the practice of providing feedback. Faculty also developed a lesson to help

students formalize their description of their problem of practice. To do so, faculty included activities that had students create the initial stages of their literature reviews.

Do. The course syllabus required students to engage in discussion around topics of defining problem of practice, literature reviews, and identifying the context of the study. As part of the students' fall coursework, they were asked to respond to the following online discussion assignment: "Why do scholarly practitioners focus on a problem of practice?" Students were instructed to engage with one another regarding the prompt and then respond to classmates' online responses accordingly. Most of the student postings and subsequent responses either directly or indirectly referenced at least one of the four EdD program tenets. The student responses on this assignment are analyzed in the next section.

Study. A qualitative analysis was conducted on the written responses to the discussion board prompt: "Why do scholarly practitioners focus on a problem of practice?" The responses were first grouped under each of the four EdD program tenets: social justice, research, practitioner, and leadership. Within each tenet a qualitative analysis was conducted using a grounded theory approach to determine patterns of responses (Glasser & Strauss, 1967). When reviewing the responses, the researchers discussed all the responses within a tenet and agreed on general themes. The researchers then read the written responses for a second time and coded the individual responses in themes within each tenet. See Table 3.

Table 3

Student Response Total by Four Main EdD Program Tenets and Prominent Themes (Cycle 3)

EdD Program Tenets and Themes	Student Response Total
Social Justice	66
Promotes equity, social justice, and quality of life	31 of 66
Understands complexity of diverse learners & environment	23 of 66
Research	99
Applies research and professional knowledge	59 of 99
Practitioner	156
Significantly contributes to improvement	43 of 156
Names and frames problems of practice	39 of 156
Develops professional practitioners	38 of 156
Leadership	31
Communicates with and engages stakeholders	16 of 31

Student responses were coded and analyzed to determine the frequency in which each of the four EdD program tenets were included, as well as the development of themes within the responses. According to the results, the tenet of practitioner was the most prominently referenced, with 156 different substantial postings across all discussion board posts. The most prominent theme within the practitioner tenet was that scholarly practitioners focus on a problem of practice because it "significantly contributes to improvement," with 43 of the 156 postings, or 27.6% being coded within this theme. This was closely followed by the theme of "names and frames problems

of practice,” with 39 of the 156 responses, or 25.0% noting such. “Develops professional practitioners” was the final theme worth inclusion, being referenced in 38 out of the 156 postings from students, or 24.4%.

Research was the next tenet of the EdD program most frequently cited in the responses of students, with 99 different substantial postings in the discussion board. Of those, 59 of the 99, or 59.6%, made reference to the theme that scholarly practitioners focus on a problem of practice to “apply research and professional knowledge.”

Social justice and leadership were the remaining tenets of the EdD program noted in student postings, with aspects of social justice being addressed in 66 student postings and leadership being addressed in 31 student postings respectively. Themes within the student postings on social justice included scholarly practitioners focusing on a problem of practice because it “promotes equity, social justice and quality of life,” with 31 of the 66 student discussion board postings, or 47.0%, alluding to this theme. An additional noteworthy theme within the tenet of social justice was that scholarly practitioners focus on a problem of practice because they “understand the complexity of diverse learners and environment,” with 23 of the 66 postings, or 34.8%, tying into this theme. The tenet of leadership had one prominent theme among students, which was that scholarly practitioners focus on a problem of practice because they “communicate with and engage stakeholders,” with 16 of the 31 postings, or 51.6%, referencing this aspect of leadership.

As with the results of cycle 1, the tenet of leadership needs to be further emphasized during the instructional activities of cycle 3 to help students see the connection between the work of the scholarly practitioner within the realm of school leadership.

Act. Faculty in this EdD program met to analyze the three cycles of data to determine a response to the research question: How has student knowledge of a scholarly practitioner evolved from pre-admission advising through the second semester of a CPED-influenced EdD program? The findings and discussions are outlined in the next section.

Findings and Discussion

During the first two semesters in the EdD program, students as practitioners advanced in their own practice by applying the research in the literature they read to their own practice. Prior to beginning the EdD program, students implemented their school districts’ initiatives and goals without much thought to the underlying research supporting the initiatives. Instead of simply following mandates as previously done, the students shared with faculty how they had begun asking critical questions to better understand the rationale behind these mandates. In addition, the EdD program had afforded these students the opportunity to read and analyze literature relevant to their practice and apply findings accordingly in their day-to-day work. Students shared in class meetings how they relished the time to read relevant scholarly articles and texts, noting how their readings revitalized their work by providing new perspectives and evidences of successes and failures.

Faculty also noticed that students were embracing the scholarly language of educational leadership. Discourse among students and with faculty evolved from talking about personal experiences utilizing social language to talking about broader leadership concepts and connections to their practice using language of leadership. Students invoked personal experiences described with language from practical interpretations of research and their readings.

Faculty noted that the change of mindset from practitioner to scholarly practitioner took time and that each individual student did so at their own pace. However, overall, the time it took

to achieve this change in mindset included all the activities from pre-admission through the first two semesters in the program. Change takes time, and all students in the program were working professionals who spent a significant portion of their time each day addressing problems of practice. The program has helped practitioners take the time to think about a problem of practice and determine the root causes of a problem. In doing so, students were able to name the various contextual aspects that affected the problem, state the procedural or institutional policies that embedded the problem of practice, and read about other educational leadership situations that may provide valuable information on how to effectively address the problem of practice.

The researchers reflected on the findings with three main questions posed in the Model for Improvement Framework (Langley et al., 2009). First question: Did faculty achieve what they set to accomplish: change the mindset of students from practitioners to scholarly practitioners? Faculty noted that shifting the students' mindsets to that of a scholarly practitioner was a work in process. Faculty realized that this process takes time and that meaningful instructional activities must be deliberately structured to coach students on this path. At the time in which this study concluded, faculty had determined that all students had a good sense of what a scholarly practitioner was and that the next step to deepening the knowledge was to tackle the investigation of a problem of practice from this perspective.

Second question: How will the faculty and students know that a change is an improvement? The three PDSA cycles indicated that students benefitted from this mindset change from practitioner to scholarly practitioner. Evidence of these benefits became apparent when students discussed practitioner issues and substantiated their assertions with examples from practice and literature reviews. In addition, students changed the way they attempted to address problems of practice by taking time to study the root causes in more depth rather than jumping into action as their practitioner roles often required them to do. Students devoted time for reflection and investigation prior to taking action.

Third question: What change can faculty make that will result in improvement? Faculty were pleased with each of the three PDSA cycles because each cycle improved the learning experiences for students. Students were active participants in growing as scholars from the admission stages. Advising provided prior to and during the admission process provided a clear picture of the program tenets and how these tenets were embedded in all the learning opportunities in the program. The first semester served to solidify the program expectations and to initiate change in the mindset from being traditional students where faculty had the answers, to valued practitioners, where faculty provided activities and opportunities for students to grow professionally while reading research and defining a problem of practice to address as their dissertation.

In conclusion, the new approach by faculty within the EdD program to aid students in the transition from practitioner to scholarly practitioner has been a success, at least preliminarily. Replication with future cohorts of students, accompanied by continued refinement of the processes outlined from admission through the first two semesters of the program, will ultimately determine whether these measures to instructing students on the role of the scholarly practitioner should be permanently embedded within the EdD program. However, the results thus far are worthy of consideration by other CPED-influenced programs facing the same challenges with preparing students to become scholarly practitioners in their respective settings.

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Examining Educational Leadership Dispositions: A Valid and Reliable Assessment of Leadership Dispositions

This manuscript has been peer-reviewed, accepted, and endorsed by the International Council of Professors of Educational Leadership (ICPEL) as a significant contribution to the scholarship and practice of school administration and K-12 education.



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Through a thorough review of research related to effective dispositional behaviors of educational leaders and with extensive input from subject matter experts, this research highlights twenty actionable behaviors associated with successful leadership in K-12 educational settings. The leadership dispositional behaviors identified in this study are indicative of promoting positive student outcomes, supporting the professional development of teachers, and creating positive work conditions for faculty and staff. The identification of leadership dispositions leading to performance-based growth and development in the discipline highlighted the need to address how postsecondary institutions can better prepare educational leadership candidates using sound measures. Adding to the body of educational leadership research, the Educational Leadership Disposition Assessment tool (EDLDA) was developed in this study using a systematic analysis of dispositional performance expectations in the discipline. The methodology for this research includes an extensive summary of steps taken to develop the EDLDA. Additionally, the psychometric evaluation of validated dispositional behaviors with calculated reliability estimates is presented in this research. Lastly, evidence of construct validity is also provided by aligning the validated dispositions with quality standards of the profession.

Keywords: disposition assessment, educational leadership dispositions, dispositions in education

If asked to describe what traits are characteristic of a good educational leader, it is very likely most individuals would agree that good leadership is characterized by trust, integrity, vision, respect, honesty, cooperation, and compassion. Most know what strong, effective educational leadership looks and feels like and it is evident when such attributes go awry. Ineffective leadership is toxic; it pollutes a work environment by engendering mistrust, suspicion, frustration, anger, and dishonesty. With a high expectancy for student academic achievement, the need for high-quality educational leaders is crucial in today's educational arena. Institutions of higher learning cannot risk graduating future school leaders who fail to possess the necessary dispositions for leading in the 21st century. The behaviors indicative of effective leadership, identifying them, and fairly assessing them are the focus of this work.

Effective school leaders are reported to have a strong and positive impact on the learning of the students under their leadership. Research, although scant, has begun to characterize specific traits and dispositions needed by school leaders to successfully lead a school, elicit respect from their staff, students and community, and positively impact student learning. For instance, in explaining the importance of Professional Standards for Educational Leaders (PSEL), the National Policy Board for Educational Administration (2018) suggested effective school leaders possess the ability to influence student learning by creating challenging learning environments that also provide supportive, caring, and compassionate conditions conducive to learning. Additional behaviors of strong leaders identified in the PSEL Standards include the ability to develop and support teachers, create positive work conditions, and engage in meaningful endeavors both in and outside of the classroom (National Policy Board for Educational Administration, 2018). In this paper, the authors define dispositions in general, develop an understanding of dispositions specific to the job of an educational leader, and then describe the development of the Educational Leadership Disposition Assessment (EDLDA).

The Challenge

Much of what is expected in the preparation of educational leaders have a direct implication with accreditation. As part of national and state accreditation requirements, educational leadership preparation programs are charged with tracking and monitoring the knowledge, skills, and dispositions of candidates. Teaching, tracking, monitoring, and assessing candidate subject matter knowledge of educational leadership, as well as their understanding of the practicality of school leadership, are expected as part of the educational leadership certification process. Therefore, most institutions offering advanced educational leadership degrees have designed and use tools to measure a candidate's knowledge and skills based on state and national standards (Brewer, Lindquist, & Altemueller, 2011; Rea et.al, 2011; Rea et. al, 2017).

The research increasingly informs us that knowledge and skills within the profession simply are not sufficient to prepare educational leaders (Wallace, 2013). There is more to consider: dispositions. Schute and Kowal (2005) acknowledge the importance of the traditional focus in educational leadership programs in areas such as human resources, law, finance, and assessment. But they emphasize that the traditional preparation is not sufficient. Their research also stresses the importance of developing dispositions appropriate to the profession and supports the notion that possession and demonstration of the proper professional dispositions can ultimately determine career success as a school leader. A challenge for educational leadership programs is determining how to define and develop dispositions of effective school leaders as well as how to seamlessly integrate dispositional training into their programmatic framework using a valid and reliable

assessment to measure such development within candidates. To fulfill accreditation standards used in higher education, program faculty are challenged to develop or discover psychometrically sound tools for use in measuring the dispositional behaviors of candidates. Researchers in the field of educational leadership concur that there is a strong need for valid and reliable instruments to measure dispositions of educational leaders (Cooper & Green, 2015; Melton, Mallory, & Green, 2010; Pregot, 2015; Schulte & Kowa, 2005).

Dispositions Defined

Taylor and Wasicsko (2000) define disposition as the personal qualities or characteristics such as, interests, values, beliefs, attitudes, and modes of adjustments that are possessed by individuals. Borko, Liston, and Whitcomb (2007) took the definition a step further suggesting dispositions are connected to actions. They describe dispositions as a person's tendencies to act in a given manner reflecting their beliefs and values. Villegas (2007) concurred by defining dispositions as tendencies for individuals to behave in a manner based on their beliefs. Therefore, disposition defined in this work is described as a construct; an observable performance-based behavior indicative of a person's values or beliefs that are manifested in a given situation which is predictive of future patterns of behavior.

Are Dispositions Measurable?

There has been concern expressed as to whether measuring a construct is feasible. Although acknowledging the need for a valid and reliable measure of disposition in educational leadership programs, Lindahl (2009) questioned the viability of creating such a tool. Furthermore, Messick (1995) cautioned that the measurement of constructs may be difficult unless great care is taken in instrument development and score interpretation. Sechrest (2005) noted that constructs have no verifiable reality beyond the specifics of their definition and operations proposed for measuring them. For instance, it is easy to verify knowledge of a mathematical algorithm, such as adding two numbers to yield a sum. An accurate answer to the equation is evidence of knowing. With constructs, evidence of knowledge is not as obvious or exact. Instead demonstration of knowing usually results from an assessment that is based on a consensus of subject matter experts and not hard evidence (Johnston, Wilson, & Almerico, 2018). Miller, et.al. (2009) also expressed concern with the measurement of constructs and characterized the notion as a subjective phenomenon. What is needed in this type of research, they explained, is a clear definition of the construct and its parameters because the selection of items in the evaluation pool is guided by the definitions generated. Different definitions can lead to different sets of items and outcomes.

Even though the concerns are reasonable, rejecting the measurement of constructs would come at a great cost to social science researchers, therefore, moving forward with this type of work is laudable and doing so with caution becomes acceptable. This type of research is further supported by measurement standards established by the joint efforts of the American Psychological Association (2018), American Educational Research Association (2018), and National Council of Measurement in Education (2018). Together, these organizations created standards for the measurement evidences of validity to be considered during peer review. The standards suggest starting with a feasible definition of the construct followed by preferred methods of reaching construct consensus.

Analysis of Educational Leadership Dispositional Research

Walters, Marzano, and McNulty (2003) examined over 5,000 studies to determine the effects of leadership practices on student learning. Their research identified a considerable relationship between quality leadership and student achievement. They went on to delineate 21 specific leadership behaviors aligned to student learning, most of which were dispositional in nature. An important point made in their work was that just as leaders can have a positive impact on student learning, they can also have an equally negative impact based on their interactions within the P-12 setting. Therefore, it is imperative that educational leadership programs identify effective leadership dispositional qualities, assess candidate demonstration of them, and teach them programmatically (Brown, 2015). Leadership dispositions make a positive impact on student learning, therefore it is a professional responsibility to ensure they are addressed and assessed in educational leadership preparation programs (Johnston, Wilson, & Almerico, 2018).

Green, Chirichello, Mallory, Melton, and Lindahl (2011) noted that many educational leadership programs refer to the national professional standards when determining which dispositions to assess programmatically. Although the current national standards for educational leadership programs (NELPS) does not specifically delineate dispositions in nature, professional dispositions are characterized in Standard 2: Ethics and Professional Norms, Standard 3: Equity, Inclusiveness, and Cultural Responsiveness, and Standard 5: Community and External Leadership and can be used as a guide for school leadership preparation.

Literature includes several operational definitions and characteristics of effective leadership dispositions. For example, Wasonga and Murphy (2007) enumerated a listing of eight important educational leadership dispositions: active listening, resilience, egalitarianism, collaboration, cultural anthropology, trustworthiness and trust, patience, and humility. Martin (2008) identified dispositions of strong leadership embedded in four domains: relationships, moral and ethical dimensions, work habits and professional demeanor, and intellectual integrity. Specifically, she identified the dispositions of effort, cooperation, and collaboration, being open-minded, self-awareness, and receptivity to unique ideas and styles. Helm (2010) identified five crucial dispositions for school leaders: courage, integrity, caring, strong work ethic, and the ability to think critically. He also emphasized the importance of school leaders' remembering what it was like to be a teacher and to keep this recollection in mind as they carry out their duties.

Green and Cooper (2013) suggested that principals would be well advised to develop and sustain supportive and positive relationships with teachers. According to their research, the relationship existing between principals and teachers have a greater influence on school culture and student achievement than any other element associated with the school. Through a meta-analysis of dispositional research in educational leadership, they identified 49 most frequently referenced dispositions describing effective educational leaders. Their research was conducted in three phases (1) surveying the literature to identify dispositions; (2) surveying school leaders to narrow down the list to preferred dispositions; and (3) asking subject matter experts to rank order the dispositions based on essentialness to the profession. Their research identified six dispositions most preferred by today's school leaders: character, communication, ethics, integrity, trust, and vision.

Methodology

The goal of this study was to operationalize educational leadership dispositions validated in the research to determine the meaning of each and to create an instrument to assess candidate dispositions in educational leadership programs. The methodology for this study was mixed methods and, in part, replicates the process described in Green and Cooper's (2013) work. Our work for this study was completed in several phases as described in subsequent sections of this paper. In all, data collection included the dissemination of two online surveys, with a response rate of 89% and several focus group discussions with leaders, practitioners, and experts in the field of educational leadership.

Selection of Participants

Solicitation for participation was extended to educational leadership practitioners in a public school district in the southeastern region of the United States, candidates in a Master's of Educational Leadership program in a mid-sized liberal arts university, and experts in the field at a fall Council for the Accreditation of Educator Preparation (CAEP) conference. Participation qualifications included having experience in educational leadership either as a school leader, district leader, teacher leader, professor of educational leadership, or candidate currently enrolled in an educational leadership program. Data collection included several phases, of which participants were notified that their participation was voluntary.

Phase One

The investigators reviewed the most recent literature to identify behaviors of educational leadership dispositions and identified 38 frequently referenced dispositions of effective school leaders. To further test the validity of the 38 dispositions, the researchers disseminated an online survey to subject matter experts ($N = 33$) asking them to rate the essentialness of each disposition in relation to educational leadership. The ratings were on a Likert scale of 1 to 4, with 1 meaning, not representative; 2 indicating somewhat representative; 3 indicating representative, and 4 reflecting that the behavior was essential to the identified disposition. In addition to a Likert rating for each disposition, the survey also included fields for additional comments. Based on survey results, dispositions with a mean score of 3.5 or less were eliminated. Additionally, open-ended responses from the survey suggested noticeable areas of repetitiveness between certain dispositions. Based on survey data and feedback, the list was reduced to 28 dispositions. The researchers then advanced their work by conducting an extensive literature review to operationalize the list of 28 by including descriptive language to illustrate each disposition. With a list of 28 dispositions and a set of descriptive behaviors for each, the researchers conducted another validity check, which is discussed in phase two.

Phase Two

The next phase of data collection involved disseminating a second online survey to receive large scale feedback from educational leadership practitioners regarding the 28 identified dispositions and associated descriptive behaviors. The online survey, constructed using the Qualtrics platform, was disseminated to school leaders throughout a large metropolitan area in the southeastern region

of the United States and to participants attending a session at the 2018 fall CAEP conference (N = 130), which resulted in a 72% response rate. The anonymous survey asked participants to rate the degree to which each behavioral descriptor was representative of the prescribed disposition. The ratings were on a Likert scale of 1 to 4, with 1 meaning, not representative; 2 indicating somewhat representative; 3 indicating representative, and 4 reflecting that the behavior was essential to the identified disposition. Mean scores lower than 3.5 on a 4-point scale were eliminated. In addition to rating the essentialness, survey takers were also prompted to provide open-ended feedback. Based on responses, six dispositions were eliminated, resulting in 22 retained dispositions.

Phase Three

After eliminating behaviors due to statistical insignificance, as described in phase two, the researchers conducted a series of focus groups during phase three. The first focus group included 13 subject matter experts, who were asked to examine the 22 dispositions and associated behaviors using the Q-sort method. In small groups, participants discussed the dispositional behaviors and determined which disposition was the best fit for each associated behavior. Each small group presented their Q-sort results, which lead to a full group discussion regarding the validity of each of the 22 dispositions and behaviors. The focus group resulted in the elimination of six dispositions due to overlap and suggested that one disposition (develops meaningful relationships) should be added back to the list due to its significance in the role of being an effective educational leader.

The last focus group with subject matter experts (N = 5) involved a final review of the 22 dispositions and behaviors. This focus group did not engage in a Q-sort, however, their efforts included a thorough review and discussion of the dispositions and behaviors to determine the validity of each item. The researchers felt it was necessary to conduct an additional focus group because the five subject matter experts also volunteered to participate in the construction of the EDLDA (Educational Leadership Disposition Assessment) instrument. Qualitative data collected from this focus group resulted in the elimination of eight dispositions (because they were already mentioned in the descriptive behaviors in other areas) and the addition of one disposition, resulting in fifteen dispositions. The research team collaborated with the five subject matter experts to construct the EDLDA instrument which includes a three-point rubric with fifteen dispositions and descriptive language to describe each disposition.

Interrater Reliability

Interrater reliability was conducted using educational leadership professors in a Master's of Educational Leadership program in a mid-sized university located in the southeastern region of the United States. Using the EDLDA, two instructors rated a set of educational leadership candidates (N = 11) whom they had both instructed during the same semester. Both instructors are practitioners in the field of educational leadership with more than 20 years of experience in education. The correlation coefficient for each disposition is reflected in Table 2.

EDA Racial Bias, Gender Bias, and Ambiguity Examination

The research team also conducted a check for racial bias, gender, and ambiguity within the assessment with a group of experts (N=18). Subject matter experts included school district leaders, educational leadership faculty members, and one classroom teacher with a degree in educational

leadership. Participants were asked to review the dispositions on the EDLDA to identify any perceived racial bias, gender bias, and ambiguity on the assessment. Under the disposition “confidence”, participants identified “arrogance” as a subjective descriptor and suggested another word or phrase be used to communicate how overconfidence is a weakness in leadership. The bias and ambiguity test also illuminated questions from participants that warranted clearer language in the descriptors for integrity and adaptable. All other dispositional descriptors were free of racial bias, gender bias, or ambiguity.

Results and Findings

The results of the study resulted in fifteen dispositions essential to educational leadership. These data not only indicate that the dispositions are vital for educational leadership practitioners but also suggest that the identified dispositions and behaviors are essential for preparing candidates in educational leadership preparatory programs. An analysis of the data for each phase of the research is provided.

Based on a thorough analysis of the literature, 38 dispositions were initially identified as essential traits for educational leadership practitioners. Table 1 includes the 38 dispositions along with mean scores for phase one and phase two where subject matter experts were asked to rate the essentialness of each disposition on a 4-point Likert scale.

Table 1
Mean Scores for Educational Leadership Dispositions

Disposition	Phase One Mean Scores	Phase Two Mean Scores
Confidence	3.7	3.8
Persistent	3.7	3.7
Driven to learn	3.7	3.6
Develops meaningful relationships	3.6	3.4
Encourages active participation by all stakeholders	3.6	3.6
Conflict resolution	3.8	3.9
Trust	3.8	3.9
Confronts conflict for what is ethical	3.8	3.0
High expectations	3.8	3.6
Honesty (transparency)	3.7	2.8
Open communication	3.7	3.9
Accountable for one’s own behavior	3.7	3.7
Positive attitude	3.5	3.6
Vision	3.8	3.8
Integrity	3.7	3.6
Character	3.8	3.1
Creates a positive culture	3.8	3.8
Strong work ethic	3.8	3.7
Ability to think critically	3.7	3.3
Commitment	3.8	3.9
Fairness	3.5	3.1

Consistency	3.7	3.5
Inspires others to accomplish challenging work	3.9	3.8
Continuous improvement of professional behavior	3.7	3.7
Open to change	3.6	3.4
Self-aware of strengths and weaknesses	3.6	3.8
Embraces diversity	3.9	3.9
Possesses professional beliefs about schools, teaching, & learning	3.8	3.8
Risk-taker	3.2	
Flexible	3.3	
Seeks feedback	3.4	
Sees developing others as a priority	3.4	
Compassion	3.2	
Courage	3.4	
Selflessness	2.9	
Sense of humor	2.8	
Openness	2.9	
Individual dignity	3.2	

**Note: Dispositions with mean scores below 3.5 were not included in Phase Two.*

An analysis of the data collected during phase one resulted in a solid list of 28 leadership dispositions with mean scores ranging between 3.6 to 3.9. Dispositions dropped from the list due to low mean scores were: risk-taker; flexible; seeks feedback; sees developing others as a priority; compassion; courage; selflessness; sense of humor; openness; and individual dignity. Of those dropped, sense of humor had the lowest mean score of 2.8. When analyzing the retained dispositions, inspires others to do challenging work and embraces diversity were among the highest with a mean score of 3.9. Data collected during phase two involved a 2nd dissemination of an online survey to rate how well the associated behaviors connected with each identified disposition. Just as with phase one, behaviors with a mean score below 3.5 on a 4-point Likert scale were dropped.

After two rounds of validity checks as described in phases one and two and an extensive literature review to qualitatively define and describe each disposition using descriptive behaviors, the researchers conducted two focus groups with subject matter experts. Based on participant feedback, the research team used the qualitative data provided during the focus group discussions to refine the descriptive language used to operationalize each of the identified dispositions, resulting in the enhancement of the following dispositions: confidence, work ethic, adaptable, and positive attitude.

. Focus group discussions also resulted in the elimination of two dispositions: persistent and character. Based on participant feedback, persistent was eliminated because it aligned closely with determined. Participants also shared that persistent is widely subjective and could be interpreted negatively. Regarding character, participants acknowledged the importance of this disposition as critical for leadership development but shared that character is the essence of all identified dispositions and felt that it should not be added as a separate disposition, but instead is the undergirding of all dispositions. Participants also shared that character is closely aligned to integrity.

After developing descriptive language based on feedback from subject matter experts during the two focus group discussions, the researchers checked for interrater reliability. The correlation coefficients for each disposition are reflected in Table 2.

Table 2
Interrater Reliability Correlation Coefficients for Leadership Dispositions

Disposition	Coefficient
Confidence	0.81
Determined	0.81
Vision	0.90
Driven	0.90
Conflict Resolution	1.00
Embraces Diversity	0.81
Relational	0.90
High Expectations	0.81
Positive Attitude	0.72
Effective Communication	0.81
Integrity	0.81
Positive Culture	0.90
Work Ethic	0.72
Adaptable	0.72
Self-Aware	0.81

Implications

Principal retention is of great concern across the U.S. According to a 2017 national survey, approximately 18 percent of public school principals had left the career. Astoundingly, the turnover rate in high-poverty schools is even higher at 21 percent (Brown, 2015; Goldring & Taie, pg. 8). Because of the need to retain highly effective school leaders, proper preparation is vital for university educational leadership programs as well as school district leadership development efforts.

In regards to preparation for future school leaders, the significance of this work is two-fold. The development of the educational leadership disposition assessment, as discussed in this article, has implications for school leadership preparation programs who are vested in developing future school leaders with strong affective and professional qualities. If situated correctly, principal preparation programs can use this work to further enhance their curriculum and leadership development within their programs. For example, the EDLDA has been adopted and is currently used in three Masters in educational leadership programs across the United States. These programs currently use the assessment as a leadership development tool to help candidates develop and refine their dispositional attributes. Implementation and use of the EDLDA have been integrated into these educational leadership programs in the following ways:

- The EDLDA is introduced to all new candidates at the start of their coursework in the educational leadership program.
- Candidates complete an EDLDA self-assessment upon admission.
- Administrative mentors assess and coach candidates on the EDLDA throughout the course of their internship.

- Aspects of the EDLDA are integrated throughout courses, such as school law, human resources, and problem-solving and visionary leadership.
- Candidates complete a final self-assessment during their last semester along with a comparative analysis of their dispositional growth.

Furthermore, the implications of this work sit heavily with institutions either seeking or maintaining state and/or national accreditation, as preparing candidates for professional leadership dispositions is included in CAEP, NELP, and state standards. While we know possessing knowledge and skills are essential for effective leadership, this research further supports the importance of fully preparing candidates by reinforcing their dispositional capacity as future school leaders.

Lastly, the EDLDA can be used as a professional development tool in supporting school districts in their efforts to grow and develop new school leaders. Most, if not all, districts are guided by professional leadership competencies which include dispositional aspects (Welch & Hodge, 2018). For example, the 2015 Professional Standards for Educational Leaders (PSEL), formerly known as the Interstate School Leaders Licensure Consortium (ISLLC) standards, references professional dispositions in standard 2: ethics and professional norms, standard 3: equity and cultural responsiveness, standard 5: community of care and support for students, and standard 8: meaningful engagement of families and community (Carol & Young, 2013; National Policy Board for Education Administration, 2018).

Conclusion

Data collection resulted in the development of the Educational Leadership Disposition Assessment (EDLDA), which includes fifteen dispositions with indicators (descriptive behaviors) for each identified leadership disposition. The EDLDA is formatted as a rubric with three rating categories (meets expectations, developing, needs improvement). The value of this research strengthens the capacity for educational leadership preparation programs to train their candidates in professional dispositions. In addition to identifying dispositions essential for effective school leadership, this research also resulted in the development of an instrument with operational descriptors for each of the fifteen dispositions. Lastly, to ensure the EDLDA clearly assessed dispositions essential to the profession, the research team conducted an alignment of the dispositions to the National Educational Leadership Preparation Standards (NELPS) set forth by the National Policy Board for Educational Administration (2018).

In conclusion, issues regarding the retention rate of educational leader's nationwide points to the complexities, responsibilities, and relentless pressures of the job, which ultimately impact student achievement in the U.S. Ongoing support and professional development is needed at all levels of school leadership, whether it be at the pre-service level within university educational leadership programs, for novice practitioners, or for veteran school leaders. It is imperative that school leaders are fully developed and prepared to lead within a profession that continues to change drastically.

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A Model for *Preparing Academic Leaders* (Project PAL) for Teachers of English Learners Building Instructional Capacity Within a Socially-Responsible Principal Preparation Program

This manuscript has been peer-reviewed, accepted, and endorsed by the International Council of Professors of Educational Leadership (ICPEL) as a significant contribution to the scholarship and practice of school administration and K-12 education.



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The purpose of this paper is to share a model of a principal preparation program that is socially responsible. The program is collaborative with two departments at the Texas A&M University College of Education and Human Development: Educational Administration and Human Resource Development and Educational Psychology (Bilingual Education). The program is being tested as (a) a four-semester program for 36 credit hours, (b) a year-long residency with an intensive summer residency, (c) a randomized control trial study with the treatment students receiving virtual mentoring and coaching, and (d) an analysis of family-community involvement program and dual language program development by the candidates. How we are evaluating the project is also shared.

Keywords: educational leadership preparation program, bilingual education, program development

Preparing Academic Leaders: Project PAL is a funded national professional development (NPD, U.S. Department of Education, Office of English Language Acquisition, #T365Z170073) grant for 120 certified in-service teachers (three cohorts of 40 teachers each), who serve on campuses with large numbers of English learners (ELs), with the intent to prepare campus leaders who can improve instruction to increase ELs' academic achievement and enroll in the Texas A&M University (TAMU), Department of Educational Administration and Human Resource Development (EAHRD) Principal Preparation Program. These in-service teachers meet high professional standards as they receive dual (two) advanced professional certifications in bilingual or English as second language (ESL) education and leadership. The 800 total hours of PD is divided as follows: 540 hours of professional development (PD) and 260 hours of practicum throughout the year (100 hours) and an intensive summer leadership campus residency or a traditional leadership practicum course (160 hours) on a campus that serves ELs supported via a joint program with *Educational Administration and Bilingual Education* in the College of Education and Human Development (CEHD). The intent is to train bilingual/ESL teacher leaders to "lead" efforts to increase instructional capacity on such campuses; in this way, the efforts of this project multiplies beyond the 120 participants. Project PAL includes participants from across Texas. Project PAL is supported by EAHRD, the Department of Educational Psychology, the Center for Research and Development in Dual Language and Literacy Acquisition (CRDLLA) and the Education Leadership Research Center (ELRC) at TAMU.

Project PAL (PAL) responds to the NPD use of the grant under two items: (a) the development of program curricula appropriate to the needs of the consortia participants involved and (b) provide financial assistance to pay for tuition toward the certification trainings. PAL meets the requirements of What Works Clearinghouse (WWC, 2014) without reservations by including a rigorous external evaluation with random assignment at the individual level—randomized to either treatment or control, thus, a randomized controlled trial (RCT). Treatment teachers receive Virtual Mentoring and Coaching (VMC) with the TAMU CRDLLA/ELRC Applied Pedagogical Extra Imaging System (APEXIS; Figure 1); however, all 120 candidates receive the same PD and information inclusive of leading bilingual/ESL programs for improving instruction of ELs' achievement. The treatment teachers receive a practicum experience different from control teachers. First, practicum (residency) experiences have been embedded throughout the year for both conditions, making this a year-long residency-practicum. However, in the designated summer, there are specified campus residency requirements for the treatment group; such allows the teacher leader to work with curriculum and other campus leaders in planning for the academic year for implementation with other teachers. The control group receives a typical practice practicum course with the same number of hours of commitment, but without VMC and specific planning for implementation and work with the campus team over the summer months. For control teachers there is no continuous bi-monthly mentoring/coaching on the bilingual or ESL teaching standards and leadership or training on specific types of family/parent/community involvement strategic planning and implementation or dual language (DL) specific strategic planning and implementation.



Figure 1. VMC with the TAMU CRDLLA APEXIS

We are assessing then, in the evaluation, the (a) type of standards-based practicum in leadership on campuses with large numbers of ELs and broader impact on the campuses, (b) VMC for improved instruction with teaching and leadership standards, (c) family/parent/ community involvement/engagement strategic planning and implementation with training and broader impact with families, and (d) DL programming strategic planning and implementation with training and broader impact and adoption within the school. There are RCTs with moderate levels of evidence that have been conducted by the Directors of the project related to ongoing PD and observation feedback and student improvement, and the information learned from these projects will be included in the NPD. There is, from our own prior longitudinal RCTs sponsored by the Intitute for Education Sciences (IES) and the National Science Foundation (NSF) and currently i3 validation, moderate evidence that are recognized in the WWC (one without reservations-<https://ies.ed.gov/ncee/wwc/study/81604>, Tong et al., 2014; and one with reservations-<https://ies.ed.gov/ncee/wwc/study/81605>, Tong et al., 2010). Such information is provided in the content of the NPD as it supports the bilingual/ESL teaching standards. *PAL* works with 120 in-service teacher candidates who are in progress of being or who will be trained as systemic instructional leaders for teachers of ELs and who will be able to develop and implement parent and family engagement systematic plans and DL plans that will be utilized on their campuses and that will be placed into the Massive Open Online Professional Individualized Informal Learning (MOOPIL) on the TAMU Continuing Professional Education Development (CPED) in Canvas to be shared with other teachers who work to improve the instruction for ELs, thereby, multiplying the effect of PAL. Further, PAL provides professional learning for *DL implementation models* with the PD coursework to support effective instruction for ELs on scientifically-based approaches that are aligned to standards in the strands of (a) bilingual education, DL curriculum models, (b) instructional strategies, (c) assessment of ELs, (d) social-emotional health via full service capacity schools, (e) culturally- responsive leadership, (f) legal and policy issues, (g) improvement via differentiated data, and (h) parent/family/community engagement. Additionally, PAL also improves the quality and effectiveness of the early learning level (PK-3) teachers, so that they have

the necessary knowledge, skills, and abilities to improve ELs' cognitive, health, and social-emotional PD approaches whereby theory is heavily linked to leadership practice. By 2022, PAL will have prepared 120 in-service teachers with advanced dual certifications in (a) bilingual and/or ESL certification and in (b) leadership over 5 years who can meet the needs of ELs via improving instruction and in leading such bilingual school improvement efforts. (We call the schools that serve ELs--- bilingual schools-- as a shortened language denoting that ELs are present and are *bi-lingual*.)

Related Review of Literature

Even though the principal's role has evolved from being a school manager to that of being an instructional leader (Lynch, 2012), we have found that it is difficult for the principal to be in classrooms every day and support the teachers; therefore, teacher leaders become even more critical for building instructional capacity. The role of instructional leaders is to demonstrate a knowledge of complexities in teaching diverse learners and learning as they build instructional capacity of teachers. To that end, campus teacher leaders influence student learning by shaping the classroom conditions and aiding in and building quality teachers. According to the Council of Chief State School Officers (2012), we should ensure that the leader we produce is:

... ready on day one ... to transform school learning environments ... they craft the school's vision, mission, and strategic goals to focus on and support high levels of learning for all students and high expectations for all members of the school community... transform schools... lead others in using performance outcomes and other data to strategically align people, time, funding, and school processes... continually improve student achievement and growth, and to nurture and sustain a positive climate and safe school environment... work with others to develop, implement, and refine processes to select, induct, support, evaluate, and retain quality personnel to serve in instructional and support roles... nurture and support professional growth in others and appropriately share leadership responsibilities...lead and support outreach to students' families and the wider community to respond to community needs and interests and to integrate community resources into the school. (p. iv)

PAL engages this framework and the bilingual and ESL and principal frameworks from Texas, along with conceptual bases from the Administrator's [Leader's] Roles in Programs for Linguistically and Culturally Diverse Students, by Education Northwest (2010) and the National Center for Education Evaluation and Regional Assistance (Grady & O'Dwyer, 2014). In 2014, the National Center for Education Evaluation and Regional Assistance observed leaders who have training develop a familiarity with research-based guidelines and standards for educating English language learner students that allows them to lead their school in implementing effective programs for these students. Indeed, it is critical to build a group of academic leaders on campuses, because they are responsible for articulating their school's policies on ELs to school staff and community and families, modeling the behaviors and attitudes they expect teachers to adopt, designating the staff that oversee their school's program for ELs, and ensuring that the staff receive adequate training and PD (Hill & Flynn, 2004; Horwitz et al., 2009; Tung et al., 2011; Wrigley, 2000). We argue *PAL candidates in training* who wish to serve on such campuses should be provided PD with such behaviors.

Since bilingual/ESL education is an educational reform effort aimed at improving schooling, lessons learned from the literature on educational change and reform in general should

also be used to put bilingual programs (DL and ESL programs) into place at the campus or district level. Even so, in reviewing the educational reform literature, there were relatively few studies that included bilingual programs as part of the reform movements sweeping through school systems in recent years. We plan in our program to work with an *at promise* mentality and not one of *at risk* and to assist these future instructional leaders in becoming collaborators and implementers and leaders of bilingual education programs as they build instructional capacity. Barriers to bilingual program implementation are expressed by Lara-Alecio, Tong, Irby, and Mathes (2009) suggesting the inconsistency in starting bilingual programs and in defining the specific type of bilingual program have traditionally held back the advancement of the field and students' achievement. Therefore, our blending of leadership and bilingual education information and practice for our participants makes sense in producing those who can transform lives.

Teacher Support

Villareal (2001) emphasized that campus leaders should know how to improve the climate for ELs by setting high expectations and validating diverse language and cultures, establish and nurture human relationships, provide opportunities for collaborative planning and designing of curriculum or ELs, provide staff development on effective teaching strategies with topics evolving around highly interactive classrooms, program-solving, and discovery (also noted by Collier and Thomas, 2014; and Tong, Irby, Lara-Alecio, and Koch, 2014), recruit teachers who are culturally responsive, provide guidance to new teachers, map assets represented by the community, organize instruction with flexibility in instructional design, align curriculum both horizontally and vertically, establish a program that capitalizes on the linguistic strengths of students and families and the community, ensure and deliver grade-level content, and promote instructional approaches that foster biliteracy development and content acquisition.

One of the major contributions that we will provide is the information on instructional strategies and *how PAL in-service teachers can aid not only themselves, but also other bilingual/ESL teachers* to better serve and teach ELs. Current existing variations within bilingual/ESL classrooms do not lend themselves to universalizing a one-size-fits-all in all campuses. For instance, bilingual/ESL classroom settings are usually identified through program-level implementation. For example, the field of bilingual education recognizes the following programs for the acquisition of English as a second language: (a) late-exit, (b) early-exit, (c) maintenance, (d) the 50/50 or 90/10 classroom model, (e) English immersion, (f) one-way immersion, (g) two-way immersion or DL, (h) English as a second language support. The Every Student Succeeds Act (ESSA) of 2015 does not specifically support states' development of bilingual and DL programs, but it does indicate that there must be via such a grant as the NPD and PAL, PD activities that will improve classroom instruction for ELs and assist educational personnel working with ELs to meet high professional standards, including standards for certification and licensure as teachers who work in language instruction educational programs or serve ELs. Knowledge is needed in the toolkit of new leaders to be able to deliberately move the campus, families, and community toward a consensus and program decisions. This is critical in that there are large numbers of ELs in schools and not all of them are performing well in academics. In 2015- 2016 (the year prior to initiation of this project) per TEA (2016), 69% of third grade ELs passed the STAAR reading (this was the lowest passing rate alongside those served in Special Education--51%) and in 2018-2019, 39% of ELs per TEA (2020), met grade

level or above in reading. Since language skills are so important in reading, and writing and all the other content subjects that involve reading, it is not surprising to see that ELs are placed at a disadvantage in learning content area domains when compared with their native English-speaking peers (August & Shanahan, 2006; Tong, Luo, Irby, Lara-Alecio, & Rivera, 2015).

Leaders' Influence

A teacher's classroom instruction is the most influential factor in student achievement (Hattie, 2009; Skourdoubis, 2014; Stronge, Ward, & Grant, 2011; Waters, Marzano, & McNulty, 2003), but several researchers have indicated that the campus leader is also a critical influence in improving student achievement (Branch et al., 2013; Hattie, 2009; Leithwood, Seashore-Louis, Anderson, & Wahlstrom, 2004; Robinson, Lloyd, & Rowe, 2008; Waters, Marzano, & McNulty, 2003). It is critical that the in-service teachers in PAL get instructional and leadership training via the PD—instructional leadership is not just about the principal only; we advocate it is all leaders on the campus. Hattie (2009) also concluded in his meta-synthesis of a meta-analysis of 800 studies on student achievement that the instructional leadership role has the most influence on student outcomes by “promoting and participating in teacher learning and development, planning, coordinating, and evaluating teaching and the curriculum, strategic resourcing, establishing goals and expectations, and insuring an orderly and supportive environment both inside and outside the classroom” (pp. 83-84). The researchers in these studies highlighted that there is a definitive and impactful relationship between the *instructional leader and student achievement*. This means theoretically if PAL can build strong instructional leaders in bilingual/ESL education, then there will be a positive impact in student achievement.

Logic Model

The Logic Model for PAL is presented in Figure 2. The Logic Model is a comprehensive conceptual framework beginning with the Situation, then moves to Priorities and Intended Outcomes and is accomplished via Inputs leading to Outputs of Activities and Participation. Such yields Impact Outcomes -- Short, Medium, and Long Term. Such processes, strategies, practices, and products are undergirded by Assumptions, External Factors, and Evaluation.

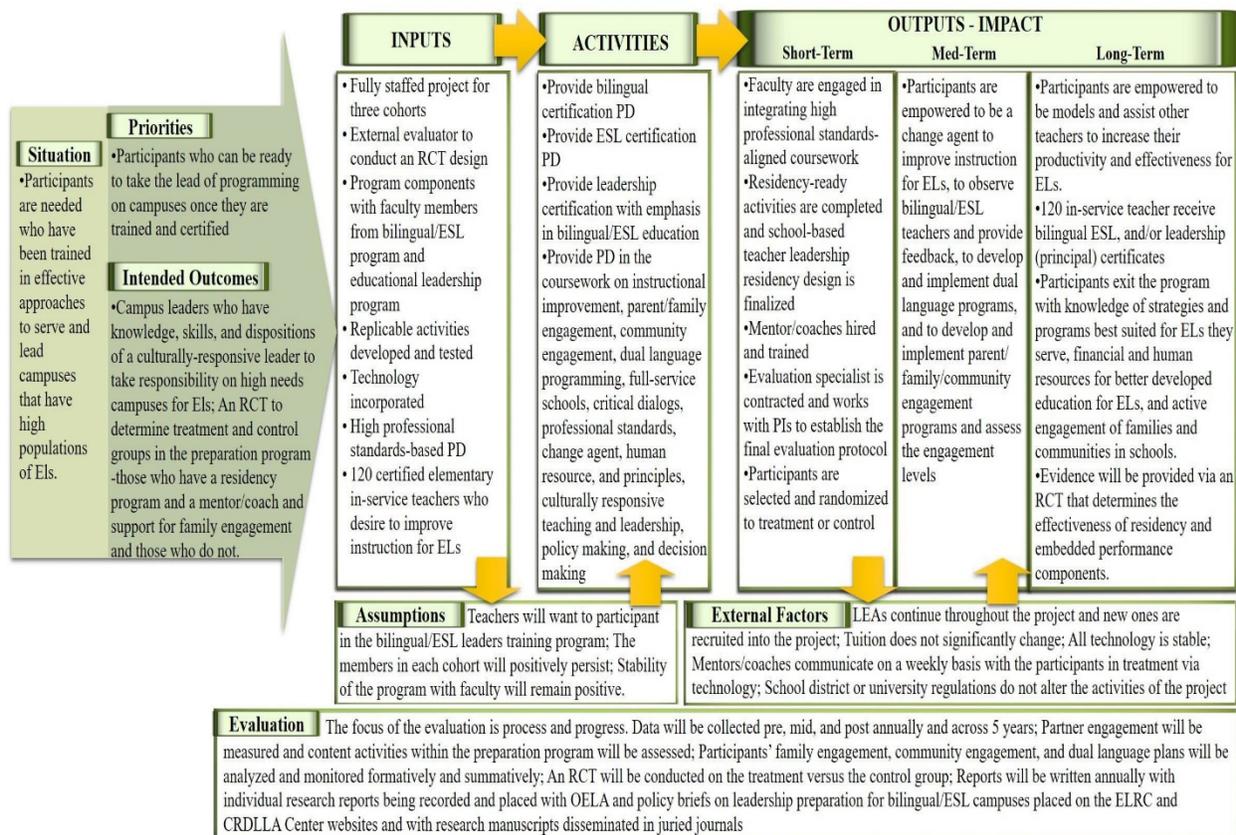


Figure 2. Logic model for Project PAL.

PAL Outcomes

PAL's *outcome* is that 120 in-service teachers over the 5-year period will receive certification training in bilingual or ESL education and will receive certification (and a Master's Degree) to be prepared to lead campuses and influence policy in districts that serve Els (Please note that in Texas, there is only one leadership campus certification and that is at the campus principal, but it allows teachers to be an instructional specialist, assistant principal, coordinator, or principal. Therefore, we include the principal certification along with bilingual or ESL certification training which will be included in the 800 PD hours. The in-service teachers hold a basic elementary teaching certificate, but may not hold a bilingual/ESL certificate or a leadership certificate, and PAL is for those latter teachers. The 120 teachers, by cohort, will be prepared to build instructional capacity within an intensive 12-month PD as they will have a deeper understanding of high professional standards as bilingual or ESL certified teachers, and all will be certified in campus leadership. Among the 3 cohorts of participants, 20 of the 40 members out of each cohort group (total 60 over the 5 years) will be randomly assigned to the treatment group of mentoring/coaching and summer instructional improvement leadership residency program and a strategic planning and implementation of family/community engagement and DL program development at a bilingual school. The other 20 members of the 40 from each cohort (total of 60 over 5 years) will be randomly assigned to the control group of a traditional leadership practicum (generalized leadership on similar type campuses), without specific

mentoring/ coaching for embedded residency activities and without the summer residency or strategic planning and implementation of family/community engagement and DL programming.

PAL Goals

The goal of PAL is to prepare 120 in-service teacher candidates for leading at the education of ELs via PD (three cohorts over the five years of the grant). To that end, we will recruit, identify, and certify 120 in-service teachers who desire to be leaders (78 have been recruited for the first two cohorts), and who will obtain a leadership position, in bilingual/ESL education at the campus level. One cohort began Fall, 2018, another will begin Fall, 2019, and a final one Summer, 2021. The candidates will complete certification in bilingual, including the Texas Bilingual Target Language Proficiency Test (BTLPT) exam- two exams; ESL, and/or principal certification (In Texas, this is the only campus-level leadership certification available) with PD focused on becoming a culturally and linguistically responsive leader who is ready to lead instructional improvement and develop programs on campuses that serve ELs—use a disposition scale (to be developed) for analysis between groups.

PAL is about providing PD and developing leaders. Campus leaders do not always emerge from graduate programs in school administration fully prepared to lead a school (Gray, Fry, Bottoms, & O’Neill, 2007); however, PAL plans to have its candidates come out of the program with a campus-level leadership position in hand serving campuses with ELs—for instructional improvement and impact on the campuses.

PAL builds (with the university faculty and successful practicing leaders of bilingual campuses) a replicable (as determined effective a randomized control trial) standards-aligned and competency-based 12-month modular PD and degree program-- testing campus-level practicum intern residency, mentoring/coaching for aspiring instructional leaders, and family/community engagement plans and implementation with leaders who will be competent in the high standards of bilingual/ESL education on campuses that serve ELs. A replicable standards-aligned 12-month, modular bilingual/ESL leadership preparation program. (Faculty-driven and developed curriculum for instructional leaders that is modular and not bound by three-hour credits; rather, it is standards-aligned [Texas Bilingual, ESL, and Principal Standards- Note- Principal standards are the only campus level leadership standards in Texas] and developed in an integrated manner). From this objective will come a leadership PD curriculum that is targeted for leadership on high needs, campuses that serve ELs that can be replicated. The curriculum will be shared via the Centers (CRDLLA and ELRC) and will be accessible nationwide beginning the third year of the grant. Following are the Texas bilingual standards, the ESL standards, and the principal standards from the Texas Administrative Code §149.2001 to which the culturally and linguistically-responsive PD coursework will be aligned. First are the bilingual teacher standards (abbreviated) for the first bilingual exam Bilingual Supplemental Certification (164 TExEs exam):

- Standard (ST) I. The bilingual education teacher (BET) has communicative competence and academic language proficiency in the first language (L1) and in the second language (L2);
- ST II. The BET has knowledge of the foundations of bilingual education and the concepts of bilingualism and biculturalism;
- ST III. The BET knows the process of first- and second-language acquisition and development;

- ST V. The BET has a comprehensive knowledge of the development and assessment of literacy in the primary language;
- ST V. The BET has a comprehensive knowledge of the development and assessment of biliteracy;
- ST VI. The BET has a comprehensive knowledge of content-area instruction in L1 and L2. (Bilingual Target Language Proficiency Test (BTLPT) -Spanish (190) will also be included in the certification for bilingual education as it is required to pass two exams).

Second, is the English as second language teacher standards (ESL TExEs 154 exam):

- ST I. The ESL teacher (ESLT) understands fundamental language concepts and knows the structure and conventions of the English language;
- ST II. The ESLT has knowledge of the foundations of ESL education and factors that contribute to an effective multicultural and multilingual learning environment;
- ST III. The ESLT understands the processes of first- and second-language acquisition and uses this knowledge to promote students' language development in English;
- ST IV. The ESLT understands ESL teaching methods and uses this knowledge to plan and implement effective, developmentally appropriate ESL instruction;
- ST V. The ESLT has knowledge of the factors that affect ESL students' learning of academic content, language, and culture;
- ST VI. The ESLT understands formal and informal assessment procedures and instruments (language proficiency and academic achievement) used in ESL programs and uses assessment results to plan and adapt instruction;
- ST VII. The ESLT knows how to serve as an advocate for ESL students and facilitate family and community involvement in their education.

Third, is the principal campus leadership campus standards (Principal TExES exam 068):

- ST 1. Instructional Leadership. The principal (PR) is responsible for ensuring every student receives high-quality instruction;
- ST 2. Human Capital. The PR is responsible for ensuring there are high-quality teachers and staff in every classroom and throughout the school;
- ST 3. Executive Leadership. The PR is responsible for modeling a consistent focus on and commitment to improving student learning;
- ST 4. School Culture. The PR is responsible for establishing and implementing a shared vision and culture of high expectations for all staff and students;
- ST 5. Strategic Operations. The PR is responsible for implementing systems that align with the school's vision and improve the quality of instruction.

The process of developing modular course content and aligning it to the Texas Principal Standards has resulted in increased communication between the Bilingual Education and Educational Administration. Faculty have produced seamless integrated modules in syllabi with new Texas requirements for practice in the state examinations of #268 and the Performance Assessment for School Leaders (PASL) that are available for continuous use.

PAL will determine, via an RCT, the effectiveness of a standards-aligned and competency-based 12-month modular training program that is inclusive of a focus on bilingual/ESL education with bilingual campus practicum residency and mentoring/coaching for aspiring school leaders who will lead on campus instructional improvement that serves Els (compared to a 12-month modular training program that is inclusive of a focus on bilingual/ESL education without residency with a traditional practicum on a bilingual campus, and mentoring/coaching for aspiring school leaders who will lead on bilingual campuses).

Residency includes an intensive 160 hours of active engagement of digging deep into the bilingual program data field-based on the assigned campus; coming to an understanding of strengths and weaknesses based on the data and critical dialogues with the curriculum leaders and the administration on the campus; determining the alignment of the curriculum for bilingual/ESL students with state standards and district and campus missions; planning and developing with a strategic plan a family/community engagement project (with a planning committee of teachers and parents) and planning for the assessment of that project, and planning and developing a DL program for the campus (based on data, interviews with teachers, central and campus administrators, and parents) and planning an action research project to determine effectiveness. The other practicum for control participants only include projects they develop that are aligned with leadership/principal standards. The RCT will demonstrate if such a summer campus practicum residency is a replicable model or if a traditional practicum internship without a mentor/coach is equally as effective—both completed on campuses serving Els.

PAL assesses the competency of the teacher leadership candidates to observe a teachers' instruction based on a low-inference teacher observation scale and to determine the quality level of outcome-based instructional feedback for the observed teachers via differences between treatment (who have mentors/coaches) and control candidates (without). Trained PAL candidates observe bilingual/ESL classrooms and provide feedback to improve instruction of teacher of Els. This activity is assessed and shared as the observation scale that can assist in providing specific feedback to teachers as it relates to the pedagogy in a bilingual instructional environment. Researchers (e.g. August & Shanahan, 2006; Cheung & Slavin, 2005; Irby, Tong, Lara-Alecio, Meyer, & Rodríguez, 2007; Lara-Alecio, Tong, Irby, & Mathes, 2009) have affirmed that within fields such as bilingual education there still an ever-increasing need to develop more instruments that can measure various facets of the bilingual classrooms such as instructional events, daily observation and language of instruction and to test such instruments. As a result, there “continues to be a lack of research on the knowledge base and empirical studies on teachers' pedagogical delivery, as well as the documented quality of teaching as shaped by instructional intervention” (Lara-Alecio et al., 2013, p. 1130). In the past few years, there have been newly developed studies (Echevarria, Vogt, & Short, 2012; Foorman, Goldenberg, Carlson, Saunders & Pollard- Durodola, 2004; Freedson, et al., 2009; Halle, Whittaker, & Anderson, 2010; Hamre, et. Al, 2012; Holland-Coviello, 2005; Pianta, La Paro, Hamre, 2009; Rivera & Tharp, 2004; Rivera, Waxman, & Powers, 2012; Waxman & Padron, 2004) that reiterate the importance of effective classroom observation instruments as they evaluate classroom activities, quality of instruction, language and literacy, as well as social, behavioral, cognitive and linguistic development of students. We will use a low-inference assessment, the TBOP (Transitional Bilingual Observation Protocol – renamed as the Pedagogical Observation Protocol in 2020; See Appendix), which was developed and validated from the four-dimensional bilingual pedagogical classroom theory (Lara-Alecio & Parker 1994) to encompass major instructional domains will be employed by the candidates; it has had numerous validations since that time and has been tested in a variety of EL settings, such as DL, developmental classrooms, and ESL classrooms; additionally, it has been suggested as yielding outcomes for teachers of Els and Els' achievement (Garza, 2012; Goldenberg, 2013; Montalvo, Combes, & Kea, 2014 ; Murphy, 2015). There are four domains we will observe: Language of Instruction and Language of Response, Language Content, Communication Mode, and Activity Structures. Physical grouping and content area are also observed. Additionally, Bilingual/ESL strategies are observed.

PAL has identified and trained two mentors per cohort, through a web-based workshop so that they may mentor the treatment group during residency-ready activities and the summer residency program and during parent engagement and dual language programming to determine, qualitatively, differences in residency and internship experiences between the treatment group with a mentor/coach and the control group without a mentor/coach. A mentoring and coaching program for 60 of the treatment teacher leadership candidates in treatment in residency-ready activities and the summer residency program, and a qualitative report on the differences between the treatment and control group related to experiences in the residency or internship programs. A mentoring/coaching manual will be posted in the third year of PAL on the ELRC and CRDLLA websites that will give guidance for assisting teacher leader candidates in residency-ready activities that are aligned to bilingual, ESL, and leadership standards for a summer residency program, all for serving as a leader on a high needs campus that serves ELs. The manual will delineate specifics for our mentors/coaches.

PAL, at the end of the full 5 years, will determine to what extent differences exist between the 60 treatment and 60 control participants on the following: (a) parents and families engage based on 120 candidates developed and implemented parent and family engagement systematic plans during the residency-ready annual activities or the summer residency program and (b) community members in community engagement plans developed and implemented in the semester of the developing school- community partnerships. There will be 120 parent and family and community systematic engagement plans that are developed, implemented, assessed based on a developed quantitative rubric, and posted on the Education Leadership Research Center (ELRC) and Center for Research and Development for DL and Literacy Acquisition (CRDLLA) websites. The 120 parent/family and community engagement plans that will be implemented and assessed will be posted on the ELRC and CRDLLA websites. These research-based field-tested engagement plans may be used by other leaders of such campuses.

PAL will determine differences between the 60 treatment and 60 control teachers on their *DL models* that they develop and implement (in conjunction with their practicing principals and campus teams) as analyzed by candidates' action research projects via qualitative data from teachers and practicing principals and by quantitative data from students' test scores on state exams. There will be 120 developed, adapted, and implemented DL models on campuses that serve EL students and 120 action research projects written and posted to the ELRC and the CRDLLA websites and analyzed for differences (qualitative differences are noted from the action research projects). There will be 120 action research project reports that on DL models the candidates develop or adapt and implement and assess will be posted on the ELRC and CRDLLA websites to be used by other such campuses. Findings from the analyses will also be posted on the websites for furthering implications for practice.

Evaluation of the PAL Project

The focus of the evaluation for PAL will be the formative and summative evaluation by collecting internal, external, and contextual information pertaining to the participants and training. Participants will be observed in simulated leadership situations on bilingual/ESL campuses. Field notes, program portfolios, interview data, and case studies will be collected per participant. To allow flexibility both formal and informal evaluation activities will be conducted by the university PIs and ultimately, the external evaluator. The informal evaluation procedures will include observations, interviews, open-ended examinations, and written and verbal reports to describe the

process of the project activities, such as curriculum content, field practicum residency, curriculum, parent/community involvement, DL implementations. Formal procedures will be Bilingual TExES and BTLPT exam, ESL TExES exam, Texas Principal Exam (campus leadership). Beginning each academic year, there will be a faculty meeting addressing the gains or results from the previous year and discussions of areas that require reinforcement. To evaluate PAL, an experimental design will be implemented in the following steps. First, a power analysis (Faul, Erdfelder, Lang & Buchner, 2007) using G*Power 3.1 was performed to determine the minimum number of participants that will yield sufficient statistical power and strong validity of the results, so as to address the confirmatory research questions (presented below). Given the criteria of alpha level at .05, power of .80 and a medium effect size of .30 (Cohen, 1988) for a repeated measure design with 3 time points (on the sample test from the state exam), the required sample size is calculated to be 110. As a result, we over-sample a total of 120 to account for possible attrition along the project. Second, each cohort of 40 participants will then be randomly assigned into treatment (n=20) and control (n=20) groups, for a total of 3 cohorts of participants. The treatment group will receive the residency program with residency ready activities throughout the project and the support from mentors, supported family and community engagement strategic planning and implementation, and the control group will participate in a traditional practicum, without specific mentoring/coaching for embedded targeted work to improve schools that serve ELs. More specifically, we will evaluate number of program completers/graduation rate will be documented each year, and a comparison will be conducted to identify any difference in the number of completers/graduation rate between treatment and control. We will evaluate and test the effectiveness of the standards- aligned, competency-based 12-month modular leadership preparation program inclusive of an intensive mentored/coached campus-based residency program, a comparison will be conducted between treatment and control based on (a) course GPA, (b) their performance on the sample test of state exam on principalship at the beginning and end of the program, (c) the bilingual or ESL state exam score [participants may take that exam after they complete the courses], and (d) the campus English proficiency rating (taken due to the potential impact of the leader in training). In addition, program completers /graduates will be asked to complete a survey rating the effectiveness of the program in increasing their knowledge and skills related to parent, family, and community engagement. We will determine differences between the treatment and control groups on the participant results of their scoring (we have developed an interrater reliability measure for the TBOP). All teachers will be trained, but the treatment group will have VMC to assist in observing and giving feedback. We will use a questionnaire with the treatment participants during mid and end of the project asking them annually the experiences about being provided support from a mentor/coach campus-based leadership residency phase of the program, and the two mentors will also document qualitative data on how VMC is carried out. We will evaluate the number of parent and family and community systematic plans, as well as plans for DL model and action research projects will be documented throughout the project with rubrics to be developed to assess differences between treatment and control groups. We have an Evaluation Specialist who has overall responsibility for evaluation and running of the RCT. In addition to analyzing the PAL with the RCT and qualitatively, the evaluator will also evaluate PAL internally to determine if it meets the objectives, the evaluator will also conduct scientifically-based research. She will also assess overall the objectives-based and management-oriented evaluation plan which, like the management plan, is presented under four main categories: (a) Program Management, (b) Academic Program, (c) School & District Relations, (d) Project Director (*Is the PI*). The plan is

a series of overall evaluation questions, with five elaborations for each question: (a) What evaluative criterion will be used?; (b) Who has direct responsibility for answering the question? (ES=evaluator; PD=project director/principal investigators; M=mentors; P=professors; PC=Post-doc coordinator; BA=bilingual teacher leadership students); (c) What measurement method will be used? (IQ=interview/questions; D=documentation; QC=Quality check; LR=log record of events; DO=Direct Observation; S=standardized measure); (d) What main purpose will S=standardized measure); (d) What main purpose will be served by the evaluation? (I=improve; V=verify; D=document; P=planning; Dis=dissemination); (e) On what schedule the evaluation will take place (C=continuous; Pre=prior to project; Post=end of project; M=monthly; W=weekly; S=semester; 2y=two times per year)? After each question, there are answers to the questions above abbreviated as indicated above with “/” separating questions b, c, d, and e.

Program Management

1. Are teachers successfully recruited in a fair and unbiased manner and are they recruited with respect for traditionally under-represented students to join in the PAL program? (PD;PC/D/D/Pre;S) 2. Are individual campuses utilized for field-based research and are the projects efficiently conducted and maintained? (PD;P;PC/QC/D;I/ S) 3. Are Mentors successfully oriented to program? (PD;PC;P/DO/I/Pre) 4. Are effective accounting / purchasing / payroll procedures established in a timely manner? (PD/D/D/Pre) 5. Is high morale and collaborative spirit maintained in PAL? (PD;PC/DO/I/C) 6. Are reasonable Monthly program goals set by PI (Program Director), and is goal progress assayed, monitored and publicized? (PD;PC/D/I;P/M).

Academic Program

1. Do participants maintain high academic achievement in program courses? (PD;PC;P;BA/D/D/C) 2. Do participants demonstrate skills in key program content objectives: transfer of effective theory and practice into field-based experiences, classroom-based and language application, study skills / learning/ leadership/ instructional feedback strategies for developing learning communities? (PD;PC; P;BA;M/S/DO;D) 3. Do participants demonstrate skills in collaboration / consultation with regular, bilingual/ESL teachers, students, and parents? (PD;PC;M/D;DO;QC/D/S) 4. Do participants demonstrate skills in action research and conference presentations? (P/DO/D; DIS/S) 5. Do project leadership candidates demonstrate sensitivity to the participants? (PD; PC; M/I;DO/I;V/C) 6. Do the leaders in training on campuses demonstrate peer-supervision or coaching skills? (PD; PC; M/ I; DO/I; V/C) 7. Do graduates have an impact on the student achievement scores and on parent/ family/community involvement on the campus through efforts they made in leadership? (PD; PC; M/ I; DO/I; V/C) 8. To what extent do participants pass the state certification exams and how quickly are they placed into leadership positions, particularly within one year from graduation? (ES; PC; M/ I; DO/I; V/C) 9. Is all PD aligned to state standards? (PD; PC; M/ I; DO/I; V/C).

School & District Relations

1. Does PAL respect and follow school and district procedures? (PD;PC;P/D;LR/D/S) 2. Does PAL help support school and district program goals? (PD;PC;P/D;LR/D/S) 3. Is effective and timely communication established and maintained with school principal, mentors, project

participants, and faculty (PD;PC;P;M/D;LR/D/S) 4. Do school programs benefit from collaboration with University on-site training/mentoring as part of the campus residency program? (PD;PC;P/D;LR/D;P/S) 5. Are all campus curricula aligned with the state standards on which the PAL student works and did the PAL students work in that alignment to improve education for the EL students? (ES;PC;P/D;LR/D;P/S).

Project Director

1. Are program existence, design, and accomplishments effectively publicized throughout Texas? (ES/D/V;DIS/2Y) 2. Is PAL existence, design, and accomplishments effectively publicized throughout region and nation? (ES/D/V;DIS/2Y) 3. Do participants become more successful and influential bilingual/ESL leaders and advocates for the EL child? (ES;PD;PC/IQ;D/V;DIS/S) 4. Is each objective accomplished in the grant? (ES;PD;PC/IQ;D;DO;LR/V;D;DIS/Post—after each objectives timeline). Again, the formal activities will include the following the objective performance measures: (a) quantitative procedures on the recruitment, curriculum, and retention and absenteeism records of administrator candidates and mentors, and (b) the candidate's performance on state standards-based examinations, (c) 120 dual language program action research project results, (d) 120 parent-family-community involvement modules, and (f) participants' TExES exam standards aligned to coursework and standards, course GPA, and campus English proficiency ratings and state campus ratings.

The evaluation will be a thorough, careful consideration of internal, external, and contextual information and project activities will be evaluated and modified if necessary to ensure that the project's objectives are realized. A summative report of the project will be submitted at the end of each year and as reporting periods require. As outlined above, the evaluation combines both qualitative and quantitative methodologies. The qualitative data will be gathered through the use of survey, field report by the mentors/coaches, and rubrics. The quantitative data will be collected from: (a) state certification exams (bilingual/ESL/principal); results are reported as a score in the range of 100-300, with a total test scaled score of 240 as the minimum passing score. Minimum passing standards for the tests were established by SBEC with input from committees of Texas educators]; (b) state English proficiency test, i.e, Texas English Language Proficiency Assessment System (TELPAS), (c) number of program completers, (d) ratings of campus by the state, (e) rubric scores for the action research projects on DL programs, (f) number of hits on the website, and (g) number of disseminations. TELPAS is a state-wide teacher rating scale aligned with state standards and English language proficiency standards (ELPS) to measure ELs' language skills in speaking, listening, reading and writing. A composite rating is also designated in each of these four areas to each individual ELs, as well as an overall rating inclusive of all ELs on campus, as well as all these four areas for each campus. In this project, we will use the school-level Texas English Language Proficiency Assessment System (TELPAS) rating as one outcome measure. Furthermore, evaluation procedures will take place through the collection of internal, external, and contextual data pertaining to the participants and the program. In order to receive a certificate in principalship (the only campus leadership certificate) in Texas, there are five requirements and those will be followed and checked by the evaluators with TAMU: (a) must hold a master's degree from a university that is accredited by an accrediting agency recognized by the Texas Higher Education Coordinating Board (THECB), (b) hold a valid classroom teaching certificate, (c) have two years of creditable teaching experience as a classroom teacher,

(d) successfully complete an approved principal educator preparation program, and (f) successfully complete the required exam.

Research Questions

In this paper, we are giving the entire overview of the project. We are providing how the questions we are asking and how we will collect and analyze data for the project. In PAL, in addition to the process evaluation questions presented in D.2., we propose to address the following exploratory and *confirmatory questions* in the RCT evaluation (see Appendix) for the alignment between research questions and objectives and the reliability and validity of performance measures): ***Exploratory Question (EQ) 1 (Objective 1)***. What is the total number of certified completers in the PAL program?; ***EQ 2. (Objective 2)***. Based on a document analysis of the curriculum for PD, is it developed as an integrated standards-aligned curriculum and is it completed prior to delivering the PAL program?; ***EQ 3. (Objective 3 and 5)*** What is treatment teachers' perceived effectiveness of the residency program or the typical practicum program?; ***EQ 4. (Objective 5)*** How do treatment teachers perceive the quality of the university supervisor, and open-ended questionnaires of the participants, as well as rub coaching/mentoring feedback in the treatment group?; ***EQ 5. (Objective 6)*** What is treatment teachers' perceived effectiveness of the planning and implementation of family/community engagement? ***EQ 6. (Objective 7)*** Do in-service teachers' performance between treatment and control condition differ on their DL action research projects as measured by developed qualitative rubrics (to be developed)? ***Confirmatory Questions 1-6 (Objectives 3 and 4): 1. a.*** Do in-service teachers' performance between treatment and control condition differ as measured by their performance on the sample test developed from the state exam by the end of year 5?; ***1.b.*** Do in-service teachers' performance in the treatment condition progress over time as a result of project PAL by the end of year 5?; ***2.*** Do in-service teachers' performance between treatment and control condition differ as measured by their course GPA by the end of year 5?; ***3.*** Do in-service teachers' performance between treatment and control condition differ as measured by campus English proficiency rating by the end of year 5?; ***4.*** Do in-service teachers' performance between treatment and control condition differ as measured by their observation reports of other teachers for building instructional capacity by each cohort?; ***5.*** Do in-service teachers' performance on a disposition scale (researcher developed based on culturally-responsive bilingual/ESL leadership training) differ between treatment and control condition? The same questions will also be answered at the end of each cohort participation, independently, as well as accumulatively, as a means of formative assessment and exploratory analysis, and by year 5 a confirmatory analysis with 5-year accumulative data will be appropriate as the statistical power becomes sufficient.

Data Collection and Analysis

To answer confirmatory question 1, prior to the initiation of PAL, baseline data will be collected that includes teachers' years of teaching, background knowledge, and experiences in working on bilingual campuses, as well as sample items on the TExES exam. The same measure will be administered during the mid and end of the program so as to establish a trajectory of growth, and to compare between treatment and control groups. Analysis of Covariance (ANCOVA) will be conducted to examine the difference on the outcome of sample test items with their initial performance as a covariate. To answer confirmatory question 2, baseline data collected from

question 1 will be used as covariate, and participants' course GPA will be used as the outcome measure to allow for analysis of covariance and to control for initial difference, if there is any, between treatment and control condition. Data collected in the mid of the program will also be investigated explanatorily to provide formative feedback regarding the implementation of the project. To answer confirmatory question 3, ANCOVA will be conducted with school TELPAS rating from the previous school year as covariate to control for any possible initial difference between treatment and control groups. To answer confirmatory question 4, a chi-square test of independence will be conducted with TBOP (TBOP is a frequency count low-inference observation instrument) principal candidate ratings between treatment and control groups. To answer confirmatory question 5, ANCOVA will be conducted to compare treatment and control teachers on their performance on disposition scale at the end of their cohort participation, using their scores collected at the beginning of the cohort as covariate. The descriptive or qualitative data to answer the exploratory questions 1-6 will be collected from each cohort toward the end of their participation through survey and questionnaire, which will be analyzed using constant comparative method and will be coded according to themes for identifying trends or patterns. Data, researcher, and method triangulation and low inference descriptors will address credibility (internal validity) and reliability of our data.

Conclusion

We hope that this overview of Project PAL may serve as a guide to other program faculty who wish to work on socially responsible programs serving high-needs students. Additionally, as a postscript, we have positive results (100% pass rates on our first group of test takers on the new Texas 268 principals' exam, and we are hoping to have more data published shortly on a Master's Degree Program that is inclusive of bilingual/ESL courses and leadership courses and completed within four semesters with three courses per semester and with practicum/residency being a year-long (three semesters) and an intense summer residency included.

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Perceptions of RTI Implementations Among Administrators in Rural Elementary Texas Public Schools

This manuscript has been peer-reviewed, accepted, and endorsed by the International Council of Professors of Educational Leadership (ICPEL) as a significant contribution to the scholarship and practice of school administration and K-12 education.



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The purpose of this qualitative research study was to explore the perceptions of RTI implementation among administrators in rural Texas elementary schools. Qualitative research was needed to provide administrators with a comprehensive understanding of the demands of RTI implementation (Benjamin, 2011). The researcher conducted a qualitative study in which administrators from rural elementary public schools in Texas were selected because of their knowledge and experience in the educational system. Participants participated in semi-structured interviews that focused on the implementation of RTI in their school. Research questions focused on student success related to RTI and implementation of RTI in rural schools. A review of the literature examined the existing literature on the historical perspective, definition, and components of RTI, as well as the diverse needs of students and how special education relates to RTI. This study fills this gap through the use of hermeneutic phenomenology, which organized and structured the perceptions of experienced educators. The findings resulted in six themes that were value, leadership, training, processes, student focus, and concerns including funding, resources, teacher turnover, time and training.

Keywords: Intervention, Special Education, Hermeneutic Phenomenology, Academic Needs, Behavioral Needs

Response to intervention (RTI) provides a framework for prevention and intervention (McDaniel, Albritton, & Roach, 2013). The process used by schools that employ RTI helps teachers determine if a student reacts to evidence-based instruction in an expected manner (Stecker, Fuchs, & Fuchs, 2008). The primary benefit of this process is the provision of service to students who have unmet academic or behavioral needs (Glover & DiPerna, 2007). RTI is intended for use as a preventive method for an intervention prior to testing for special education that was developed after the reauthorization of Individuals with Disabilities Act (IDEA) in 2004. The use of RTI to determine whether students make appropriate progress and how to intervene, if an intervention is deemed necessary, was permitted by IDEA (Nai-Cheng, 2014). Since learning disability (LD) was identified as a category for students in 1977, the number of students classified as LD has increased more than 200% (Vaughn, Linan-Thompson, & Hickman, 2003). Timely and precise identification of students with disabilities is critical; students must receive services that can help them to be successful as quickly as possible (Bradley, Danielson, & Doolittle, 2005).

Even with the length of time RTI has been available, schools are still struggling to implement programs. Rural schools, in particular, struggle with RTI implementation (Walker, 2006). Barrio and Combes (2015) carried out a study on the level of concern among teachers with the implementation of RTI. The findings of the study suggested that teachers do not feel adequately prepared to implement RTIs in their own schools. The lack of preparation of teachers is not the only issue teachers in rural areas face. There are no state or federal funds allocated specifically for RTI implementation at the campus or district level (Rudd, Richardson, & Christian, 2015). With a lack of funding as well as personnel training, RTI implementation in rural areas can become nearly impossible. Samson (2009) found that a number of resources including books, trainings, websites, and articles that are focused on RTI have become available, but little guidance on how to proceed with implementation of an RTI framework existed. This study fills this gap through the use of hermeneutic phenomenology, which can organize and structure the perceptions of experienced educators. Data were collected from a sample group through an interview protocol (Creswell, 2009).

Statement of the Problem

RTI is one of the most common initiatives currently implemented to help all U.S. students have equitable access to general education (Stuart, Rinaldi, & Higgins-Averill, 2011).

Rural schools, in particular, struggle with RTI implementation (Walker, 2006). With a lack of funding as well as personnel training, RTI implementation in rural areas can become nearly impossible.

Although government and state mandates strongly encourage schools to implement RTI programs, teachers and staff are still reluctant to embrace the approach as an educational change because it is difficult to implement due to the barriers people place between themselves and change (Avant & Lindsey, 2015). Some adversaries of RTI claim that these programs delay special education referrals, which is a denial of the free and appropriate public education to students with disabilities (Carney & Stiefel, 2008), which is another barrier to implementation.

Purpose of the Study

The purpose of the researcher was to explore the perceptions of RTI implementation among administrators in rural Texas elementary schools. RTI programs typically focus on instructional

outcomes and an attempt to close the achievement gap (Fletcher & Vaughn, 2009), which applies to both suburban and more rural schools. Texas public schools are identified by Texas Education Agency (TEA) and placed into one of nine categories: independent town, non-metropolitan, fast growing, major urban, major suburban, other central city, other central city suburban, non-metropolitan: stable, rural, and charter school districts. TEA (2013) identifies rural schools as “either: (a) an enrollment of between 300 and the median district enrollment for the state and an enrollment growth rate over the past five years of less than 20 percent; or (b) an enrollment of less than 300 students” (p. 3). RTI implementation is challenging to many administrators, but even more challenging to administrators who are in rural Texas elementary public schools because they do not always have as many resources as larger districts, or those who are closer to the state department of education, education service centers, or nearby colleges (Stecker et al., 2008).

Literature Review

The RTI framework has led to a shift in the educational system, in which schools must pursue other ideas to assist students who struggle with coursework before they are tested and/or identified as special education students (Cowan & Maxwell, 2015). Since the early days of special education, teachers referred struggling students to special education assessment because they did not feel prepared to meet their instructional needs (Richards et al., 2007). Carney and Stiefel (2008) reported, “RTI has come to schools through federal legislation but it has been left to educators and researchers to interpret and investigate the best means of operationalizing this intent to ensure that student difficulties do not stem from instructional deficiencies” (p. 61). Public school administrators are responsible for the implementation of RTI.

An effective RTI model includes quality instruction, progress monitoring, intervention, supports, and assessments. A three-tier model in which students move through different prevention and intervention phases based on their individual needs shapes effective RTIs (McDaniel et al., 2013). If a student has moved through all stages of this model and is still not successful, they will then be assessed for special education services. A strong RTI program will be based on a structured, data-driven system that is flexible and regularly monitors the progress of students (Bradley et al., 2005). McDaniel et al. (2013) found that few RTI articles have addressed audiences such as general educators and educational leaders. McDaniel et al. (2013) found that most research on RTI focused on progress monitoring and targeted interventions. RTI implementation is highly complex, and does not follow a linear path (Avant & Lindsey, 2015).

Like many education initiatives, a gap still exists between research and practice with RTI (Hill, King, Lemons & Partanen, 2012). Quantitative research previously carried out on RTI does not adequately fill the gap; there was a need for qualitative research as well (Benjamin, 2011). Qualitative research was necessary to provide educators with real life feedback from fellow educators who have experience with RTI models.

While many schools are adopting the RTI framework, it is important to point out that the number of professional development opportunities are limited in explaining RTI and its implementation (Samson, 2009). Rural Texas elementary schools struggle even more than other schools, due to limited resources in their area such as school finances, facilities, attracting and retaining highly qualified teachers, curriculum, policy mandates, community relations, and declining enrollment (Lamkin, 2006).

The main question that still needed to be answered was how administrators perceived and implemented response to intervention in rural Texas public elementary schools. This study filled

this gap through the use of hermeneutic phenomenology, which can organize and structure the perceptions of experienced administrators. The researcher designed this study to explore the perception of administrators on the RTI framework.

Rural schools are often lacking in resources such as funding, staffing, and professional development (Stecker et al., 2008). The sample group selected for this study was selected due to the lack of existing research focused on rural Texas public elementary schools. Many school administrators struggle to find ways to increase student achievement; through more knowledge and resources to help implement RTI, their school districts can be improved.

Methodology

A phenomenological approach was uniquely suited to meet the needs of the researcher and provided much needed information from administrators who have experience with implementation of RTI (Creswell, 2007). Hermeneutic phenomenology studies make use of interviews. A social constructivist framework carefully to explore the perceptions of RTI implementation among administrators in rural Texas public schools. The phenomenological approach was uniquely suited to meet the needs of the researcher and provided much needed information from administrators who have experience with implementation of RTI (Creswell, 2007). Research questions, design, and procedure were carefully considered as the interviews and data collection process began to take shape.

In this study the researcher followed a social constructivist framework, as it utilizes a worldview where the researcher seeks to understand the world in which they work and live. In this type of study, the researcher looked for the complexity of views as opposed to the narrow meanings assigned to categories. The goal of the researcher was to rely on the participants' views of the topic or situation. The researcher did not start with a theory; instead, she generated a theory or pattern of meaning through the study. Research questions were left broad so participants could create the meaning of the situation. Once participants provided input, the researcher interpreted findings shaped by participants' experiences and backgrounds. The interpretation component of the researcher is one reason qualitative research is sometimes characterized as interpretive research (Creswell, 2007).

Research Questions

In a social constructivist approach, research questions are left broad so participants can create and define the meaning of the situation (Creswell, 2007). Responsive interviewing in a semi-structured protocol guided the researcher; this means the main questions comprised the scaffolding of the interview. The researcher followed main questions with probing questions to help manage the conversation and fill in any missing pieces. To effectively determine perceptions of RTI implementation among administrators in rural Texas public schools, the following responsive main semi-structured interview questions were used (Rubin & Rubin, 2012):

1. How does your school discern if RTI promotes student success?
2. How do the administrators' perceptions of RTI impact its implementation at your rural Texas public school?
3. What are administrators' greatest concerns regarding the implementation of RTI in a rural Texas public school?

Participants

Based on her knowledge and experience in the educational system, the researcher purposely selected participants in this study. Only administrators from rural Texas elementary schools in the Texas Region 7 or 10 ESC designated areas were eligible for selection and participation in the study. The sample group was selected based on the recommendations of the Region 7 and Region 10 education service centers (ESC7 and ESC10) and the criteria set out in the study as prescribed (Bogdan & Biklen, 2007). This ensured that the participant criteria set forth in the study were met for each participant. An initial pool of 3 administrators were identified and solicited via e-mail. Two additional participants were solicited until saturation allowed for trustworthiness through assuring that rich descriptions were collected (Morse, 2015).

All participants had at least 3 years' experience as a campus administrator, and at least 3 or more years at the campus the participants represent. Two of the participants were females and the other 3 were males. Three of the principals had near 3 years' experience as a principal and the other 2 had over 10 years of experience at his or her campus as a principal. All 5 principals were Caucasian. The input of participants was critical when looking at the implementation of RTI in rural Texas public elementary schools.

Treatment of Data

Data for this study were collected from rural public-school administrators. Participants were purposely selected by the researcher based on their knowledge and experience in the educational system. Only administrators from rural Texas elementary schools were eligible for selection and participation in the study. All participants had at least 3 years experiences as a campus administrator, and at least 3 or more years at the campus they represent. The researcher used an interview protocol as specified by Creswell (2009). The input of participants was critical when looking at the implementation of RTI in rural Texas public elementary schools.

Participants in this study shared his or her accounts of their perceptions of RTI implementation in rural Texas elementary public schools. The researcher used member checking as a strategy for trustworthiness. Sorting responses in the coding process by theme permitted the researcher to track occurrences in which participants shared similar information. The researcher constantly compared the words and phrases from coding to determine the number of themes sufficient in the presentation of findings. Each theme that appeared in this study carefully aligned with previous research. Following coding, the researcher progressed to analysis of the data. Six themes emerged following the collection, coding and analysis of the data including value, leadership, training, processes, student focused and concerns which included funding, resources, teacher turnover, time and training.

Findings, Conclusions, and Implications

The researcher explored the perceptions of RTI implementation among administrators in rural Texas elementary schools. The themes that emerged from the study were elements that the participants thought were needed in order to have gotten where they are today with RTI at his or her rural Texas elementary public school. The data collected in this study helped to answer the 3 research questions that guided this study about how his or her school discerns if RTI promotes student success, how the administrators' perceptions of RTI impact its implementation at his or

her rural Texas elementary public school and what the administrators' were most concerned with regarding the implementation of RTI at his or her rural Texas elementary public school.

The findings from this study were supported by the literature related to the perceptions of RTI implementation among administrators. Participants in this study shared his or her accounts of their perceptions of RTI implementation in rural Texas elementary public schools. The researcher used member checking as a strategy for trustworthiness. Sorting responses in the coding process by theme permitted the researcher to track occurrences in which participants shared similar information. The researcher constantly compared the words and phrases from coding to determine the number of themes sufficient in the presentation of findings. Each theme that appeared in this study carefully aligned with previous research. Following coding, the researcher progressed to analysis of the data. Six themes emerged following the collection, coding and analysis of the data. All participants expressed a need to continue learning and improving his or her RTI processes and systems at their schools. In addition to sharing his or her concerns, participants also identified practices that helped their school be successful with implementing RTI. The researcher wanted to find out why and how the participants in this study made RTI implementation so successful, even though they faced challenges associated with rural public schools in Texas. Campus and district administrators should be aware of the themes identified in this study as they try to revise or create RTI processes, as these themes have proven important to the participants who made up this qualitative study.

This study revealed that school or district leaders must value RTI in order for it to be successful. Leadership from the administrators is crucial when it comes to RTI so there will be buy-in from the staff and also so it will be sustainable. Training must occur at the beginning of the year, and include onsite coaching for teachers and staff implementing RTI. Strong processes must be in place for how RTI works and what type of data and documentation will be monitored throughout the year. The school or district must be student focused, because that is why RTI exists. Lastly, school and district administrators must identify and face the concerns that his or her school may have with the implementation of RTI. For rural schools to be successful with RTI administrators need to know where the school is and how to can address the concerns. The researcher determined that the success of RTI at participants' schools was due to the heavy involvement of administrators in RTI implementation and management.

Educational Importance of the Study

The RTI framework has led to a shift in the educational system, in which schools must pursue other ideas to assist students who struggle with coursework before they are tested and/or identified as special education students (Cowan & Maxwell, 2015). Public school administrators are responsible for the implementation of RTI. While many schools are adopting the RTI framework, it is important to point out that the number of professional development opportunities are limited in explaining RTI, and its implementation is limited because few empirical studies included a full RTI approach (Samson, 2009). Many schools do not implement RTI programs because they do not understand the rationale for changing, and they also feel that implementation is too slow a process. Rural Texas elementary schools struggle even more than other schools, due to limited resources in their area such as school finances, facilities, attracting and retaining highly qualified teachers, curriculum, policy mandates, community relations, and declining enrollment (Lamkin, 2006). Stability is desirable, and many schools would prefer to maintain their status quo with student placement than take the time and energy to change (Avant & Lindsey, 2015).

Presentation of Findings

In this study, the researcher explored the perceptions of RTI implementation among administrators in rural Texas elementary schools. The themes that emerged from the study were elements that the participants thought were needed in order to have gotten where they are today with RTI at his or her rural Texas elementary public school. The findings are the result of semi-structured interviews with the participants who had at least 3 years as an administrator, and participants were at a rural elementary public school in ESC 7 or 10 boundaries. The data collected in this study helped to answer the 3 research questions that guided this study about how his or her school discerns if RTI promotes student success, how the administrators' perceptions of RTI impact its implementation at his or her rural Texas elementary public school and what the administrators were most concerned with regarding the implementation of RTI at his or her rural Texas elementary public school.

All participants expressed a need to continue learning and improving his or her RTI processes and systems at their schools. In addition to sharing his or her concerns, participants also identified practices that helped their school be successful with implementing RTI. The findings of this study provide practical qualitative elements that expand on the existing research.

Principals willing to participate in the study provided information that led to the identification of 6 themes:

1. Value;
2. Leadership;
3. Training;
4. Processes;
5. Student focus; and
6. Concerns including funding, resources, teacher turnover, time, and training

Conclusions

The conclusions from this qualitative study filled gaps in the understanding of phenomena through the accounts experienced and shared by the campus administrators who successfully implement RTI at his or her rural elementary Texas public school. Earlier studies on RTI were generally concentrated around quantitative research. There was a demand for qualitative research as well. Qualitative research was essential to deliver educators with real life feedback from fellow educators who have experience with RTI models (Benjamin, 2011). The discoveries from this study deliver information on the lived experiences of identified by the ESC 7 and 10 as successful rural elementary campus administrators, which provided clarity and understanding for researchers, practitioners, education service centers (ESC) and collegiate educator preparation programs and state legislative bodies. Additionally, those who seek to advance to the role of a rural elementary Texas public school campus administrator can use results of this study.

Implications and Recommendations for Future Research

The researcher designed this qualitative research study to explore the perceptions of RTI implementation among administrators in rural Texas elementary schools. Qualitative research was needed to provide administrators with a comprehensive understanding of the demands of RTI implementation (Benjamin, 2011). In the limited studies of rural school districts, at-risk conditions

have been identified; this has led to these schools being overlooked (Walker, 2006). Hermeneutic phenomenology is considered interpretive or descriptive; by using a hermeneutic design, the researcher was able to gain insight from practitioners lived experiences with the implementation of RTI in rural Texas public schools (Van Manen, 2016). The researcher focused more on the area of describing versus interpreting the perceptions of administrators in regards to implementing RTI.

Recommendations for Future Research

The purpose of the researcher was to explore the perceptions of RTI implementation among administrators in rural Texas elementary schools. These facets were studied in a qualitative hermeneutic phenomenology method and provided valuable information to fill the gap in the existing literature. The need for more qualitative research on the subject of RTI is still needed. Fletcher and Vaughn (2009) indicated, “more research focusing on how schools successfully implement (and struggle to implement) RTI models will be needed” (p. 5), which this study addressed. The researcher was focused on the implementation of RTI overall, not on any particular subject; reading tended to be the main area participants discussed specifically. Future researchers could interview campus administrators with a focus on RTI mathematics in elementary school.

English Language Learners are a growing population in the state of Texas. Many schools are searching for ways to improve the way schools serve this population, and are finding that it is becoming a large group served through the RTI process (Vaughn et al., 2003). Future researchers could design a qualitative study and interview educators who are serving this population successfully utilizing the RTI framework. Sanosti et al (2010) note that there is still a need for more research. At the secondary school level, there is need of implementing interventions. At the elementary level it is common for schools to have Title I teachers, interventionists, and even RTI or intervention time built into the schedule.

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Educational Leadership Students and Mixed Reality Experiences: Building Student Confidence to Communicate with Parents and Teachers

This manuscript has been peer-reviewed, accepted, and endorsed by the International Council of Professors of Educational Leadership (ICPEL) as a significant contribution to the scholarship and practice of school administration and K-12 education.



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Preparing future school administrators to engage in effective communication with parents and teachers is a necessary component of master's of educational leadership preparation programs. Mixed reality experiences (i.e., a life-like virtual rehearsal experience) provide students with opportunities to engage in realistic practice in a low risk professional environment where they are given immediate feedback and an opportunity to reflect on the simulation experience. Through this study, researchers examined students' perceived value of the mixed reality experience in developing their conferencing communication skills with parents and teachers. Findings from this study indicated that educational leadership students placed a high value on the mixed reality experience as it related to building their confidence in speaking to parents and teachers. Given the findings from this study, educational leadership programs may want to consider infusing mixed reality experiences into their programs tailored to their specific context to transition from a traditional delivery model to a contemporary model with realistic practice aligned to the needs of schools.

Keywords: mixed reality, parent communication, teacher communication, reflective practice, and educational leadership preparation

Educational leadership preparation is best when tailored to the unique context of a program and the students (Manna, 2015). Classroom experiences, field experiences, and internships should provide a cohesive system of development (Orr & Pounder, 2011). A cohesive system of learning experiences scaffolds students from classroom practice to the field experiences and internships. To avoid ineffective field and internship practice, one educational leadership program provides for virtual rehearsal with feedback in a mixed reality environment to increase students' expertise prior to engaging with parents and teachers in school level live contexts.

Mixed reality holds promise for providing virtual rehearsal prior to educational leadership students practicing in schools and before assuming administrative positions in schools. Exploration of new immersive technologies to impact preparation of school leaders can assist in transitioning traditional preparation to contemporary preparation, aligned with the changes in schools and providing realistic practice coupled with feedback and reflection. Mixed reality combines technology with the strength of improvisational interactors to provide a life-like virtual rehearsal experiences (Dieker, Grillo, & Ramlakhan, 2012; Dieker, Hynes, Hughes, & Smith, 2008; Hughes, 2014). When this unique use of technology is implemented and combined with coaching feedback to enhance students' expertise and confidence there is potential to better prepare school leaders to communicate with parents and teachers.

Context of the Study

The problem studied was the need for educational leadership master's degree students to be prepared for diverse parent and teacher conferences before their school-based administrative internship and before subsequent appointment to an administrative position in one of the local school districts. In the regional area served by the university where this study was completed, the school community is comprised of parents and teachers who are ethnically, economically, educationally, and linguistically diverse. Schools within this community are considered urban emergent in that they share similar characteristics with schools located in larger cities like New York and Los Angeles, cities considered to be urban intensive (Milner, 2012). Therefore, practicing interactions with diverse populations is intended to develop educational leadership students' confidence and expertise in conferencing with parents and teachers during the administrative internship. Variables that researchers believed could be positively influenced with virtual rehearsal in a mixed reality environment included the level of preparedness and confidence that master's degree students have in their internship and soon thereafter as novice administrators as a result of the life-like simulated experiences.

This study examined educational leadership master's degree students' perceptions of value of these virtual rehearsals and the coaching feedback from fall semester 2013 through spring semester 2015. Master's degree students ($N = 141$) in an educational leadership program participated in virtual rehearsal with immediate coaching feedback twice as part of their coursework during their master's degree program. One of the experiences was a parent conference that resides in the course entitled Community School Administration. The second virtual rehearsal experience was a teacher post-observation conference that is included in the second teacher supervision course, aptly named Supervision II.

Specifically, the virtual rehearsal was completed through TeachLivE™, a mixed reality system. TeachLivE™ provides an immersive learning experience through a simulation where the participants are able to practice with avatars and receive immediate coaching and feedback, in a low risk environment. The simulation lab was developed to support preservice and in-service

teachers' practice with classroom situations with avatar students in a low risk professional setting. Later, the simulation system was expanded to include adult avatars for the purpose of realistic practice in communicating with parents and teachers in an administrative capacity in a low professional risk environment (Dieker et al., 2008). To analyze students' perceptions of the value of the virtual rehearsal experiences and the coaching feedback learning experiences both immediately after the simulation experience and months later at the completion of the administrative internship, the researchers designed four research questions:

(a) To what extent, if any, do Educational Leadership M.Ed. students believe the TeachLivE™ parent conference and teacher post observation conference simulation experiences to be helpful in developing their communications skills with parents and teachers?

(b) To what extent, if at all, do Educational Leadership M.Ed. students believe the TeachLivE™ coaching feedback was helpful in developing their communications skills with parents and teachers?

(c) To what extent do student reflections of the TeachLivE™ experience indicate it is beneficial in increasing skill in communicating with parents and teachers immediately following the mixed reality simulation?

(d) To what extent do Educational Leadership M.Ed. students perceive the TeachLivE™ experience to be beneficial in influencing leadership behaviors as they relate to communication with parents and teachers at the end of the second semester administrative internship?

Conceptual Framework

As described by Manna (2015), there is no one best way to prepare school leaders and, therefore, preparation should reflect the local educational needs. A template for preparation of school leaders is not enough for those entering into diverse, urban environments with high accountability for student learning in such states as Florida. Consequently, to add value to the learning experiences of master's degree students in educational leadership, faculty members at one university chose to provide virtual rehearsal in a mixed reality environment that simulates parent conferences and teacher post-observation conferences in local schools.

Mixed Reality Experiences and Coaching Feedback

Although it is considered good practice by many to role play and have peer practices, situated learning requires both content accuracy and complexity of practice (Rees Dawson & Lignugaris-Kraft, 2013). The use of peer modeling and role-playing among peers is not consistently effective because it is dependent on the skill set and comfort of students who role play, students' comfort in not being lenient with peers, and students' comfort in providing realistic diverse practice (Okita, Bailenson, & Schwartz, 2008).

Because of the need to develop consistently effective situated learning, the researchers utilized two theoretical frames, mixed reality and coaching with feedback, to improve students' expertise and to propel the preparation of school leaders into a new realm of possible delivery modes. Moving from theory to practice with scaffolded instruction and the use of virtual rehearsal, creates a safe environment in which the learner can experiment with the content without risk. A safe environment is a place "where error is welcome and fostered – because we learn so much from errors and from the feedback that then accrues from going in the wrong direction or not going or not going sufficiently fluently in the right direction" (Hattie, 2009, p. 23). As such, this safe

environment for learning provides opportunities to make curricular connections and engage in deep reflective practice (Schön, 1983). When the mixed reality experience has a realistic avatar, who looks and sounds like a human, engagement and responses are generated that are much like in a human-to-human interaction, indicating that the environment provides a social influence on participants (Fox, Janssen, Yeykelis, Segovia, & Bailenson, 2014).

The use of virtual rehearsal environments with immediate coaching and feedback maximizes the opportunity for students to improve future performance. Coaching is a way of using inquiry, providing feedback, and generative thinking to improve performance (Taylor & Chanter, 2019). In a review of over 8,000 studies, feedback was determined to be the most powerful single modification for expertise development (Hattie, 2009). Feedback can add value to the practice by identifying specific targeted components or misconceptions to build capacity of another in a contextualized experience (van Diggelen, den Brok, & Beijaard, 2012). Feedback that supports learning the most is close to the behavior, and clarifies what is correct and incorrect, and how to remedy misconceptions or ineffective practice. (Hattie, 2009; Taylor & Chanter, 2019; Taylor, Watson, & Nutta, 2014). Kluger and DeNisi (1996) saw feedback as an intervention to close the variability between desired and current performance. To improve performance, Hattie (2009) described an effective model of feedback, which includes: feed up (the goal), feedback (the result), and feed forward (next steps; p.176). By utilizing this coaching feedback model, the learner can become metacognitive of his or her own performance, adjust the performance, and continually improve proficiency (Hattie, 2009).

Methods

To complete this study on students' perceived value of the mixed reality experience and coaching feedback, the researchers designed a mixed-methods study implementing a convergent design, where both quantitative and qualitative data were collected and analyzed (Creswell & Plano Clark, 2018). Quantitative data collection was completed through the use of three survey instruments, while qualitative data collection was completed through an analysis of written student reflections following the mixed reality experience.

Population and Sample

The population of this study consisted of educational leadership students enrolled in master's degree in educational leadership (M. Ed.) program in one large university in the southeastern United States. The convenience sample used in this study was comprised of students enrolled in two target courses in the educational leadership program delivered in a face-to-face mode from the fall 2013 semester through the spring 2015 semester ($N = 141$). Both courses from which the convenience sample was drawn focused on communication skills development related to interacting with parents or teachers; thus, researchers chose these two target courses for inclusion in the study. Instructors of the two target courses agreed to include the mixed reality experience as part of students' learning experiences. Additionally, following the administrative internship and practice prior to graduation in the spring 2015 semester, participants ($N = 61$) were provided an opportunity through the program exit survey to provide additional and anonymous feedback as to the perceived value of the simulation practice and coaching feedback after completion of the administrative internship.

Data Collection Procedures

As part of the preparation to enter live situations during the required administrative internship, educational leadership students participated in two mixed reality experiences as part of a scaffolded instructional process. Through the mixed reality experiences, educational leadership students participated in a virtual rehearsal focused on specific, targeted communication skills practice where they applied theory to practice. Prior to participating in the mixed reality experience, students reviewed course-specific scenarios (i.e., a parent-based scenario or teacher-based scenario) developed by two of the authors. Students then completed a 10-minute conference with an interactor using a scenario. Two example scenarios, one from the parent conference simulation and one from the teacher conference simulation, follow.

Scenario 1: Parent Conference

Sean is an excellent student, but recently there has been a marked change in his behavior which several teachers have commented on. For the first time ever, Sean was given a detention due to his rude behavior and attitude in his mathematics class. What was particularly worrying is that Sean did not seem concerned about his behavior. His teacher called home to communicate her concerns to Sean's mother and was astounded by the response that she received. Sean's mother was abusive on the phone blaming the school for Sean's deteriorating behavior and attitude. In particular she focused on the teacher, who she said had humiliated Sean in class and seemed to hate her son. Sean no longer wanted to go to school in the morning and this was causing a great deal of stress at home. Sean's mother, Jeanette McGowan has agreed to come in for a conference with you, the administrator."

Scenario 2: Post Teacher Observation Conference

Mrs. McGowan, a first year teacher, has arrived for her post observation conference. You arrived at her class prior to it beginning so you could observe the critical first few minutes of class. Students entered the class while she was doing something on her computer and organizing materials at her desk. They proceeded to converse with one another, engage with their Netbooks, iPads, and phones. Four minutes after the bell rang to indicate the start of class, Mrs. McGowan welcomed the students and asked them to take out their books and begin reading silently on page 23, after which they were to copy down the questions she had on the Smartboard and respond to them. After giving these directions, Mrs. McGowan returned to her desk and once again engaged with the computer.

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At the conclusion of each of the two 10-minute mixed reality experiences, students received immediate coaching from an expert who gave supportive, but direct feedback on students' performance. As participants exited the simulations, perception surveys (Educational Leadership Parent Conference Simulation Feedback and the Educational Leadership Teacher Conference Simulation Feedback) were completed, collecting both demographic variable data and perceptions of the simulation practice and coaching experience. The completion of the survey was confidential in that the instructor knew who participated, but did not know which participants completed which survey.

Quantitative Instrumentation and Data Analysis

Quantitative instrumentation. A total of three survey instruments were utilized to collect quantitative data for this study. The first two instruments, the Educational Leadership Parent Conference Simulation Feedback and the Educational Leadership Teacher Conference Simulation Feedback instruments (referred to as the simulation exit surveys), were designed by the researchers to ascertain participants' perceptions of preparedness as a school leader for parent and teacher communications immediately after the virtual rehearsal experience. Both instruments were developed by the authors based on course objectives. Prior to collecting data, the two survey instruments were piloted with educational leadership faculty, including the course instructors, to ensure content validity. The instruments' Likert-style items for each mixed reality experience were: (1) As a result of this simulation, I feel more confident in speaking with (parents/teachers), (2) The simulation was helpful and should continue to be included in the M. Ed. program, (3) The simulation was realistic (4) This simulation was beneficial (5) The coach's feedback was helpful. Unique to the teacher conference instrument was item (6) I feel more comfortable setting improvement goals with a teacher. Each item was rated by participants on a 5-point Likert scale: (1) Strongly Disagree, (2) Disagree, (3) Neither Agree nor Disagree (4) Agree, and (5) Strongly Agree.

After completion of a two-semester administrative internship in the field, the M. Ed. Educational Leadership students completed the online Educational Leadership Exit Survey which included four items related to the simulation experiences, the third survey instrument used in the study. The first survey item related to the virtual rehearsal experience was, "I participated in an experience while in the educational leadership program." If students selected yes, then they were given three more items: (1) Participation in an observation feedback conference simulation increased my effectiveness in giving feedback, (2) Participation in a parent conference increased my effectiveness in communicating with parents, and (3) I recommend that the faculty continue the use of mixed reality before the students participate in experiences in real time (Educational Leadership Exit Survey, 2014). Each item had a 4-point Likert scale: (1) strongly disagree, (2), Disagree, (3) Agree, (4) Strongly Agree.

Quantitative data analysis. Descriptive statistics were used to analyze the responses to each item on the two virtual rehearsal mixed reality experience surveys. Surveys contained items ranging from strongly disagree to strongly agree on a 5-point Likert scale. From the participant responses, central tendency, frequencies, mean, mode and percentages were calculated. Response means for each item and an overall mean were calculated for each virtual rehearsal mixed reality experience.

The final data gathered and analyzed with descriptive statistics were from the M.Ed. program exit survey completed the semester of graduation. The survey contained three items

specific to the TeachLivE™ simulation experience, with responses ranging from strongly disagree to strongly agree on a 4-point Likert scale. Similar to the surveys completed immediately after the experience, these responses yielded central tendency, frequencies, mean, mode, and percentages. Response means for each item and an overall mean were calculated.

Qualitative Instrumentation and Data Analysis

Qualitative instrumentation. In both of the targeted courses, students were required to complete a one- to two-page reflection on the mixed reality experience. In the reflection, instructors of both courses asked students to reflect on what went well during the mixed reality experience and to determine what would they do differently in a similar situation, based on the coaching feedback and theoretical knowledge presented in the courses. Fifty-five de-identified reflections were shared with the researchers for analysis.

Qualitative data analysis. Student reflections provided by the course instructors on the experience were analyzed qualitatively by identifying commonalities and patterns through the constant comparison method (Glaser & Strauss, 2008). A total of 55 student reflections were collected from course instructors and analyzed by the researchers. In the examination of the reflections, three broad categories arose from the analysis. The broad categories were coded, yielding 132 individual data points related to the broad categories. Then, the categories were compared and integrated to determine themes related to student perception of the mixed reality experience (Glaser & Strauss, 2008).

Findings

The results of the quantitative and qualitative analyses are presented here. First, findings related to developing communication skills with parents and teachers are discussed as determined by survey results. Then, findings related to the coaching and feedback in the experience are presented from survey results. Finally, the results section concludes with the presentation of the qualitative findings from students' written reflections.

Quantitative Data Analysis: Developing Communication Skills and Coaching Feedback

The Educational Leadership M. Ed. students ($N = 141$) indicated through responses on the simulation exit surveys that they believed the parent conference and teacher post observation conference virtual rehearsals with feedback were helpful in developing administrative conferencing and communications skills with parents and teachers. To begin, most participants agreed or strongly agreed (94%) that the simulation experience was realistic. The perceptions of the simulation being realistic practice were clustered in agree and strongly agree with parent conference were ($M = 4.63$) and teacher conferences ($M = 4.46$). Moreover, the majority of participants (90%) indicated that they agreed or strongly agreed that the simulation made them feel more confident in speaking to parents and teachers. Specifically, the participant perceptions for the simulation being helpful in building confidence in communication skills were rated highly on a 5-point scale for the parent conference ($M = 4.41$) and for the teacher conference ($M = 4.14$). In terms of finding the virtual rehearsal to be beneficial in developing conference communication skills, participants' responses from parent conference participants ($M = 4.71$) teacher conference participants ($M = 4.59$) were high on a 5-point Likert-type scale.

In addition to finding the experience realistic and beneficial in developing their communication skills, participants also found the feedback provided by the coach to be helpful. On the 5-point Likert-type scale, the perception of the coaching feedback being helpful, 97.2% of participants ($n = 137$) responded agree or strongly agree. Only two participants (1.4%) disagreed or strongly disagreed. The mean score for the parent conference participants was 4.86 with 98.5% of participants indicating they agreed or strongly agreed. For teacher feedback, the mean score for participants was 4.76 with 95.6% indicating they agreed or strongly agreed.

On the exit survey given in a later semester at the conclusion of the two-semester administrative internship, participants indicated high value of the mixed reality simulation with the experience being beneficial to the development of speaking confidence when conferencing with parents ($M = 3.57$) and giving feedback to teachers ($M = 3.56$) on a 4-point Likert-type scale. Responses also were consistent for program continuance; most participants agreed or strongly agreed that the virtual rehearsal should continue immediately following the mixed reality practice simulation (97.2%) and after completing the internship (98.4%). The mean score for the parent conference participants was 4.84 and the mean score for the teacher post-observation conference participants was 4.39.

Building confidence in speaking and professional experiences. Simulation exit survey data related to confidence in speaking were analyzed by the professional experiences of participants and by the years of experience in education. Findings from this analysis indicated that 127 participants (90%) agreed or strongly agreed that the simulation was helpful in building their confidence in speaking across the categories of years of experience or job title. Furthermore, as part of the simulation exit surveys, participant professional experiences (i.e., job title in their school districts at the time of the study) were gathered in which 115 of the 141 (81.5%) participants indicated a current job title that required a Florida Department of Education professional license. Results of this analysis indicated that eight participants were administrators in central office administrative roles, 87 participants were classroom teachers, and 20 participants were instructional support in instructional coaching roles. Participants also provided information regarding years of experience in education (i.e., number of years in the educational field). There were no participants who had less than one year experience, 36.5% percent indicated between one to three years of experience, 29.5% indicated between four and six years of experience, 15.6% indicated between 7 and 10 years of experience and 18.2% indicated 11 or more years of experience in education. Table 1 provides a detailed account of years of experience, job title, and perceptions of the experience in helping with building confidence in speaking.

Table 1

Confidence in Speaking with Parents and Teachers Simulation Survey Responses and Years of Experience in Education

Total Years of Experience and Job Classification	<i>Strongly Disagree</i> $n = 1$	<i>Disagree</i> $n = 2$	<i>Neither Agree or Disagree</i> $n = 7$	<i>Agree</i> $n = 61$	<i>Strongly Agree</i> $n = 44$
Less than one year					
Administrator	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Classroom Teacher	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Instructional Support	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
1-3 years					

Administrator	0 (0.0)	0 (0.0)	0 (0.0)	3 (2.6)	1 (0.8)
Classroom Teacher	0 (0.0)	0 (0.0)	1 (0.8)	16 (14.0)	19 (16.6)
Instructional Support	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.8)	1 (0.8)
4-6 years					
Administrator	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (1.7)
Classroom Teacher	0 (0.0)	0 (0.0)	2 (1.7)	14 (12.2)	11 (9.6)
Instructional Support	0 (0.0)	0 (0.0)	0 (0.0)	5 (4.3)	0 (0.0)
7-10 years					
Administrator	0 (0.0)	1 (0.8)	0 (0.0)	1 (0.8)	0 (0.0)
Classroom Teacher	1 (0.8)	1 (0.8)	1 (0.9)	5 (4.3)	3 (2.6)
Instructional Support	0 (0.0)	0 (0.0)	0 (0.0)	4 (3.5)	1 (0.8)
More than 10 years					
Administrator	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Classroom Teacher	0 (0.0)	0 (0.0)	2 (1.7)	7 (6.1)	4 (3.5)
Instructional Support	0 (0.0)	0 (0.0)	1 (0.8)	5 (4.3)	2 (1.7)

Note: Disaggregated by current job title N = 115. Source: H. Buckridge (2016) p. 109

Qualitative Data Analysis: Student Reflections on the Virtual Rehearsal

Qualitative analysis of the 55 participant reflection assignments revealed four themes: (a) retelling of the experience without reflection (10.6%), (b) simulation experience (15.15%), (c) coaching and feedback (25%), (d) and participant personal performance (49.25%). As participant reflection was analyzed, participant responses were further delineated as either general or specific comments. General and specific comments were related to each of the four themes.

Simulation experience. The examination of general comments focused on the simulation experience were examined further for additional details. This analysis led to the subtheme that the simulation was beneficial (53.8%) because it was realistic (23.1%), and valuable (23.1%). Specific comments focused on the simulation experience revealed two equally occurring themes: realistic practice (42.8%) and confidence in communication (42.8%). One participant reflection comment encompassed the value of the practice, “If I could log more hours and experience different scenarios, that I would become a stronger administrator. I have learned I need much more practice, and would like much more practice. I wish there was a way that students could sign up to practice whenever they could.”

Coaching and feedback. Each general comment focused on the coaching and feedback category was examined resulting in themes focused on clear communication (62.5%), confidence in conferencing (25%), and importance of having critical conversations (12.5%). Specific comments focused on coaching and feedback resulted in themes related to improving communication skills (55.5%) and confidence in conferencing skills (33.3%). One participant shared, “There was a point when we were both talking at the same time and she [the avatar] stopped to apologize. I immediately told her that was fine and let her continue. This is the part of the coaching session that was brought to my attention. I was told that I did a good job at listening to her and making her feel special. I learned that it is ok to let others have the floor even though you are the leader.” Another participant stated, in relation to improving communication skills, “From the feedback, I realized I missed several key points. In my haste I failed to explain that her son was upset.”

Participants’ personal performance. As with other general comment categories, personal performance was examined further resulting in subthemes: importance of planning (41.3%), need to be clear in communication (34.8%), increasing confidence while conferencing (17.4%), and

being professional during conferences (6.5%). Specific comments on personal performance resulted in subthemes: communication skills (42.1%), confidence in speaking (31.6%), and planning (21.0%). One participant reflection stated, “I learned I need to focus better on what parents are telling me in a meeting. Listening carefully and pausing to create a correct response would result in a more successful meeting.” Another student encapsulated professionalism by stating, “I found it somewhat uncomfortable that the scenarios were based around students I didn’t know. This stressed the importance of being highly visible within my school so I can maintain relationships with my students, families and staff.”

Discussion and Implications for Practice

The discussions and implications for practice begins with a discussion of educational leadership students’ perceptions of the perceived value of developing conferencing communication skills for parents and teachers through virtual rehearsal. Then, students’ perceived value of the coaching feedback following the simulation is discussed. The discussion concludes with students’ ability to reflect on practice as a result of the virtual rehearsal.

Communication Skills Development

The virtual rehearsal experience provided educational leadership students with the opportunity to practice conferencing in a low professional risk environment where they could make deep curricular connections between (a) effective communication strategies for engaging with parents and teachers and (b) application of the communication skills in the simulation (Dieker et al., 2012; Dieker et al., 2008; Schön, 1983). Through the simulation, students engaged with a realistic avatar who simulated with accuracy the complexity involved in communicating with a parent or teacher in similar conferencing situation (Fox et al., 2014; Rees Dawson, & Lignugaris-Kraft, 2013). Triangulation of both survey responses and participants’ written reflections, revealed that the realistic experience of the simulation was valuable and aided participants in their development of communication skills. General comments found in student reflections on the favorable experience of the simulation were consistent with Likert-scaled survey items. Specifically, the simulation experience furthered students’ confidence in communicating with parents and teachers. In fact, educational leadership students found the experience so valuable that they expressed a desire to have more mixed reality practice opportunities to improve communication performance. Additionally, the perceived value of the simulation experience in building communication confidence held true for participants independent of years of experience in education and current job title (e.g., administrator, teacher, or instructional support).

Coaching Feedback

Of the participants, 137 of them found the coaching feedback given during the simulation to be helpful in building their confidence in communicating with parents and teachers. As a result of the coaching feedback, participants identified communication skills and behaviors they should retain and communication skills and behaviors they needed to continue to develop. By being provided focused feedback immediately following the simulation practice, participants were able to hone specific, targeted skills (van Diggelen et al., 2012) needed to communicate with parents and teachers effectively. Furthermore, the targeted practice with focused feedback emphasized

what was correct and not correct and how to modify target skills for effectiveness (Hattie, 2009; Taylor & Chanter, 2019; Taylor et al., 2014).

Previous research in using mixed reality with teachers with student scenarios suggested that four 10-minute sessions changed target professional behaviors, and the improvements transferred into professional practice in classrooms with students (Straub, Dieker, Hynes, & Hughes, 2014). It is likely that educational leadership students also transferred improvements in communicating with parents and teachers into the two-semester administrative internship based on the high value participants placed on feedback in the exit survey. This may be because the coaching feedback provided following the simulation was predicated on the model espoused by Hattie and Timperley (2007) with feed up (where am I going?), feedback (how am I going?), and feed forward (where to next?; p. 87). Within this context, students knew they were going to engage in targeted communication skills practice, coupled with feedback on their personal performance, and reflection to identify their next steps as they continue to develop communication skills. The perceived value of the mixed reality experience, therefore, stemmed from the ability to practice in a realistic setting, to receive focused feedback on targeted skills, and to reflect on the experience to identify future skills enhancements.

Reflecting on Practice

The simulation experience also served as a vehicle to facilitate reflection to improve performance (Taylor & Chanter, 2019). Participants' written reflections on the experience underscored the connection between the virtual rehearsal and students' ability to reflect on their personal performance in relation to communication skills development. By using reflective practice as a component of learning through experience in the simulation (Harvey, Coulson, & McMaugh, 2016), participants were able to reflect on various aspects of their personal performance, including being clear when communicating, having confidence while conferencing, and being professional during conferencing. Moreover, the reflective practice highlighted communication skills participants perceived as warranting further development based on their personal performance during the simulation. As a result of the reflective practice, participants identified actions that would have resulted in a successful conference such as listening carefully.

Limitations

The limitation of the study is that it took place in one university educational leadership master's degree program over five consecutive semesters. Although the school community and students are diverse, the study was limited to one geographic region in central Florida. Furthermore, the study did not endeavor to objectively ascertain the expertise of the students once they were in the school environment and relied only on students' perceptions of their ability to successfully engage in administrative conferences with parents and teachers.

Conclusion

This study led to the finding that practicing critical content focused on communication skills in a low professional risk environment with feedback and reflection is important before becoming an administrator accountable for communicating with parents and teachers. Based on the findings of this research study, it is recommended that administrator preparation programs have access to

realistic models and practice with feedback prior to engaging in administrative conferencing situations. Furthermore, current administrators may also benefit from ongoing practice opportunities to improve their conferencing communication skills with all stakeholders. Continuing research should consider how many mixed reality sessions are needed to improve target skills for those in administrator preparation programs and those already serving as administrators in schools and school districts.

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Assessment of Training Needs of Teachers and Administrators for Effective Inclusive Education Delivery in Secondary Schools in South East Nigeria

This manuscript has been peer-reviewed, accepted, and endorsed by the International Council of Professors of Educational Leadership (ICPEL) as a significant contribution to the scholarship and practice of school administration and K-12 education.



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Inclusive education pertains to efforts directed towards overcoming the barriers that hinder students' learning and success regardless of their social background, ability, disability, sex, and other conditions. Documented evidence on the implementation of inclusive education showed a link in teachers' and administrators' training needs. This study is conducted to provide empirical evidence on the type of training and support needed for teachers and administrators in secondary schools to reduce restricted environments and enhance achievement of students with special needs. Teachers in this study are those who already teach in the public secondary schools in South East Nigeria while administrators are principals who administratively manage both the human and material resources in the secondary schools. A cross-sectional survey research design using Cluster sampling was adopted in investigating perceptions of 305 teachers and 45 administrators who are currently teaching in secondary schools in the South East Nigeria. Two instruments were used for data collection. The instrument for data collection for the quantitative analysis was a questionnaire designed by the researchers titled Inclusive Education Training Needs Assessment Questionnaire (IETNA_Q) for teachers and administrators. The qualitative method was Inclusive Education Training Needs Interview Schedule (IETN_IS). Four research questions guided the study. One null hypothesis tested at .05 level of significance was used to probe further on the study. In order to address the research questions, quantitative methodology was adopted using percentages, mean, standard deviation and t-test for independent sample statistical techniques, while qualitative data obtained were analyzed for the purpose of identifying themes that emerged from the interview data and was used in the discussions of findings. The results show that,

generally, teachers understand the concept of inclusive education more than the administrators do. A significant difference was in the mean responses of teachers ($M= 86.90$, $SD= 14.09$) and the administrators ($M= 79.76$, $SD = 14.09$); $t = (348) = 3.175$, $p = .002$ in managing instruction. However, based on the findings, the researchers recommend that periodical training should be given to both teachers and administrators. The training will enable teachers to be more committed in an inclusive education class while administrators will gain more knowledge and skills to manage inclusive education.

Keywords: Inclusive Education, Training Needs, Special Needs Persons, Assessment, and Teachers

Inclusive education is a global education reform that pertains to efforts directed towards overcoming the barriers that hinder students' learning and success due to social background, ability, race, sex, and other conditions. Teachers believe in the concept of inclusive education and are interested in rendering services to their students (Kern, 2006). Although their attitude varies with evidence of increasing the lower academic achievement among students with special needs (Taweechaisupapong, 2015). Researchers believed that the observed low academic achievement was due to lack of technical knowledge in operating technology driven equipment (Agbaenyega & Klibthong, 2014; Gonzalez-Gil, Martin-Pastor, Flores, Jenaro, Poy , & Gomez-Vela 2013 & Taweechaisupapong, 2014); poor methods of teaching, and inadequate provision of facilities and materials to enhance learning in an inclusive setting (Ogba & Igu 2011). However, there has not been a systematic evaluation to ascertain if there has been proper implementation of the practice (Taweechaisupapong, 2015; UNESCO, 2005), whether the necessary supports are being provided (Catholic Relief Service [CRS], 2010) or the training needs of the teachers and administrators are adequate (Sukbunpant, Arthar-Kelly & Dempsey, 2013). Hence this study placed its focus on teachers' and administrators' training needs and support towards inclusive education in Nigeria.

The Nigerian government, just like other countries of the world, had identified education as a potent instrument for social and economic advancement (Ogba & Igu 2012; Federal Republic of Nigeria, 2004). Education globally is seen as a crucial factor which enormously contributes to sustainable development, stability, and peace within and among countries (Ocho, 2005). Education is also an imperative strategy for economic competitiveness in the global economy (United Nationals, 2015). Hence, the need to provide education for all was declared in the World Education Conference in Jomtien Thailand in 1990. In 2000, another education conference was held in Dakar, Senegal to assess the achievement of Education for All (EFA) goals. The United Nations Development Program (UNDP) came up with an 8-goal development program termed *The Millennium Development Goals (MDGs)* which equally among others emphasized the right to education for every child (Malale & Zwane, 2018). All these declarations have one thing in common and that is to create and establish an educational system where all children are included so as to meet their personal educational needs. The extent to which the Nigerian government has incorporated these international inclusiveness policies attests to and affirms their readiness and commitments to the provision of education for all. However, the assessment of training needs of teachers and administrators for the implementation seems not yet to be established.

Education, being a basic need and right of every child, is supposed to be available to all irrespective of gender, color, religion, and ethnicity. The Nigerian government, realizing the essence of education, became a signatory to many international and national legislation such as the Salamanca Statement; Framework for Action on Special Needs, United Nation Decade for Literacy (UNLD), United Nations Decade for Sustainable Development (DESD), National Economic Strategy (Needs 1&2) (Ogba & Igu, 2011; Federal Ministry of Education (FME), 2008, & UNESCO, 1994). The 47th session of the international conference on education held in Geneva, from 8-11 September 2004 on the theme quality education for all young people: challenges, trends and priorities brought wide sector reforms in the Nigeria education system. The most significant was passing into law the compulsory, free and universal basic education act of 2004. This, according to Ogba and Igu (2010), demonstrated the strong political will of the nation to drive national development through education. This ensures universal access to educational opportunities at all levels which include basic, post basic, and tertiary including special needs children, youths and adults (FME, 2008). The launching of the National Policy on Education was

among the giant steps the government took which stipulates compulsory inclusive basic education for every child (FRN, 2004).

Based on the aforementioned, the Nigerian government has made several innovative policies since 2004 to address specific needs and challenges to inclusive education and such policies include National Policy on HIV and AIDS for Education Policy in Nigeria; National Policy for Integrated Early Childhood Development in Nigeria 2007; National Policy on Gender in Basic Education 2007; Guideline for the Identification of Gifted Children 2006 and The Implementation Plan For Special Needs Children 2007 (FME, 2006; 2007 & 2008) The thrust of inclusive education in Nigeria as documented in the National Policy on Special Needs Education in Nigeria 2015 laid its emphasis on the least restrictive environment, zero rejection, total inclusion, and diversification of services beyond the school setting. The foregoing indicates that the Nigerian government has supported the implementation of inclusive education program in schools. There is a need as observed by Igwe (2017) and Ocho (2007) that despite the Nigerian Government's action of signing the treaties and legislation, its implementation seems to be intermittent. Could the above observation be linked to teachers and administrators' lack of knowledge and skills as well as attitude towards inclusive education? Are there supports and training opportunities for them to benefit to be more committed? This study therefor intended to investigate if there are necessary supports and training needs available for teachers and administrators to access in achieving an inclusive program.

Conceptually, inclusive education according to UNESCO (2005) is the type of education that provides for teaching of all children of appropriate age range in a regular system of education. It is a process of addressing and responding to the diverse needs of students by increasing participation in learning and reducing exclusion within and from education (Shani, & Koss, 2014; CRS, 2010; Sanrattana, 2010; Ogba & Igu, 2011). According to UNESCO-IBE (2014) inclusive education is a right and a strategy aimed to prepare students for a 21st century globalized society. Inclusive education allows children the opportunity to fully participate in regular classroom activities irrespective of health challenges, race, family background, religion or other characteristics (Alquraini & Dianne-Gut, 2012; Mngo & Mngo, 2018). In conclusion, inclusive education can therefore be conceptualized as the education that incorporates student's diversity, whether based on economic condition, health conditions, ethnicity, or family background. It can also be described as an educational environment that accommodates students of appropriate age levels in a less restricted educational environment to receive instruction with the needed interventions and supports that will enable them be useful to themselves and society.

The objective of inclusion stems from belongingness to acceptance and a supportive system which encourages students to participate in curricular and extra-curricular activities. Inclusive education is about cutting every barrier that enhances disparities in health, economic background, culture and other related variables. According to Adetoro (2014) inclusive education aims to address the educational needs of all students in a non-threatening and supportive learning environment in order to include those who were disadvantaged and excluded from education due to "barriers to learning". The observed challenge to inclusive education in Nigeria stems from inadequate resources, inadequate professionals to teach and council students, inability to create an enabling environment for students, and the inability of government to motivate and encourage teachers and administrators (Oche, 2012; Ogba & Igu, 2008). These identified challenges do not encourage an enabling environment for administrators, teachers and students. This situation may make administrators lack the initiative to manage students and teachers. The teachers might by

deficient in possessing the skills and knowledge to organize classroom activities, and students may become demoralized and frustrated (Obi & Ashi, 2016). This is the reason for the study.

Literature Review

To buttress the preparedness of the government in ensuring that inclusive education receives attention, the Federal Republic of Nigeria (2004) maintained that the environment will be structured with adequate instructional materials to facilitate teaching and learning. These materials need to be operated by teachers who have gained experience in the operation and use of the equipment. Ogba and Igu (2013) maintain that considering the significant roles teachers play in effective operation of the educational system, they need to be motivated, developed, and supported in order to retain them in the school. Ashi (2010); Global Campaign for Education (2012); Secer (2010); Ntombela (2011) reported that there is a lack of well-trained teachers who are adequately managed and supported, preventing the actualization of education at all levels. This might be why De Boer, Pijl, and Minnaert (2011) reported that there exists a gap between the desire for inclusion and what actually occurs in its practice and management in schools (Shani & Ram, 2015). Laying credence to the above, UNESCO (2012) reported that out of 100 countries with data on primary education, 33 have less than 75% of teachers trained to the national standard. OECD (2011) maintained that teachers need to be furnished with the principles and methods of instruction to improve their skill for better classroom management activities. This is to enable them to gain more insight on how to tackle the complex nature of diversity in the classroom (Peretemode, 2004). Similarly, Ajuwon (2008) opined that for inclusive education to be actualized, teachers and principals need to be impacted with the skills, attitude, and knowledge necessary to propel effective management of both classroom and school activities. The European Agency for special needs and inclusive education, (2015) affirmed that providing support to teachers will improve their skills and knowledge. Cook, Semmel, and Gerber (1999) concluded that administrators are also a critical prerequisite for successful inclusive education as it strengthens teachers to help students overcome the barriers to learning and participation in an inclusive education. Such barriers include “existing organizational structure, inflexible and irrelevant curricula, inappropriate systems of assessment and examination, and negative attitudes and beliefs about some children’s potential according to Rouse and Florian” (2012, p.5).

The need for massive retraining of teachers who are the instruments for instructional delivery as well as administrators who manage both materials and non-material resources in inclusive education pedagogies, has been stressed independently in order to ensure the achievement of inclusive education policy (Agunloye, Davou & Osagie, 2011; Igwe, 2011; OECD, 2011; Taechaisupapong, 2014). In the opinion of Agbenyega & Klibthong (2014) the lack of adequate skills and knowledge negatively impact a teacher’s confidence in implementing inclusive education. Supportively, Taechaisupapong, (2014) reported that insufficient training of teachers and administrators has led to low morale, stress and negative attitudes towards children with special needs. Likewise, Hodkinson (2010) warned that personnel’s attitude is imperative in the achievement of inclusive education policy as it influences how they welcome and react to students with special needs in their class and need not be compromised. According to UNESCO-IBE (2015) positive attitudes of teachers and administrators is essentially needed alongside knowledge, and skills in order to reorganize and arrange educational supports for special needs children hence the emphasis on frequent training (Bentle-Williams and Morgan 2013; Cook et al. 1999; Engstrend & Roll-Petterson 2014).

Teachers need constant training to acquire knowledge and skills in the management and use of special needs facilities and equipment, such as Perkins braille, brailled textbooks, Speech trainers, calipers, crutches, audiometers, ear moulding machines, educational toys, abacus, talking watch, speech signs, braille reader, typewriting audio-visual equipment and internet (Adetoro, 2014). Conversely, Forlin and Chambers (2011) disclosed that improvement is not recorded even after teachers have been trained. Ogba and Igu (2013) state that teachers who are regarded as the most influential facilitators in the life of students need periodic training necessary for keeping them abreast with the innovative skills required in inclusive education classrooms. Training could be in the form of pre-service for potential teachers or in-service for existing teachers. Such training includes seminars, conferences, workshops, and further education.

Teachers and administrators should receive adequate training to ensure that they remain focused in providing real learning opportunities for all children, not just for students to participate in and be judged by high stake assessments which have little meaning for them (European Agency, 2011). This assertion might have accelerated the wide recognition of the need for inclusive education in promoting citizenship and acceptance of differences of opinion, conviction, belief and lifestyle. EU ministers have agreed to strengthen actions with a view to empowering teachers to take an active stand against all forms of discrimination and racism that impede learning by introducing various kinds of approaches to train and support teachers for inclusive practice (European Commission, 2015). Successful inclusive education is achieved primarily through accepting, understanding, and attending to student differences and diversity, which can include the physical, cognitive, academic, social, and emotional. The aim of inclusive education, as noted by Ainscow (2004); is to eliminate social exclusion arising from attitude of people towards individuals with special needs and the adoption of teaching strategies that accommodate every individual learner (Ogba & Igu, 2011). The exclusion of stigmatization comes with separation and segregations (Malale & Zwane, 2018). Inclusive education has to do with accepting, understanding, and attending to students' differences which may be the physical, cognitive, academic and social (McManis, 2017). Memisevic & Hodzic (2011) stated that teachers support inclusive education and are ready to practice and navigate its success.

Staff development and in-service training play an important role in achieving educational policies. Training according to Che-Omar (2014); Ekpoh, Oswald, & Victoria (2013) keeps teachers abreast of current issues in the educational parlance, enhances their professional efficiency, and increases their ability and knowledge to perform better. Adequate training makes teachers more motivated, boosts their self-efficacy, and makes them more dedicated to their duties, hence its importance in achieving inclusive education policy. Adetoro, (2014) affirmed that the practice of inclusive education is often met with challenges in different countries while Malale and Zwane (2018) referred to such challenging factors as internal and external. Internal factors could be administrative, which includes leadership, mentoring, motivation, attitude, environment, placement, and inadequate training of teachers. Alternatively, external challenges might include government policies, recruitment of teachers, provision of special needs facilities and equipment, among others. Both forms of challenges constitute barriers to the implementation of inclusive education in Nigeria. McManis (2017), reported that for inclusive education to function, administrators and teachers need to be provided with training that will make them effective and efficient in manipulating available instructional materials. Ekpoh, Oswald, and Victoria (2013) carried out a study on staff development programs among secondary schools' teachers' job performance in Uyo metropolis, Nigeria and found out that training enhances teachers' skills and knowledge through the acquisition of new concepts, methods, classroom management and

approaches to evaluate students based on standard. Avramidis, Bayliss & Burden (2002), in their survey, found out that despite teachers' support of the concept of inclusive education, literature has continued to suggest that in practice they are not prepared. This lack of professional development for teachers coupled with insufficient facilities and teachers' incompetence in the use of available resources is an enemy to successful inclusive education (Malale & Zwane, 2018). Studies in Nigeria by Obi & Ashi, (2016) also found inadequate trained personnel and inadequate materials as being responsible for poor implementation of inclusive education in Nigeria and found the need for training of teachers.

A search through the literature has shown that not many studies have been carried out in relation to how effectively inclusive education has been rolled out in Nigerian secondary schools. However, the few studies available focused on the part that has to do with the importance of and policies for implementation. No study had been carried out on the training needs of teachers and administrators on the above subject. This is the gap this study is set to cover.

Problem of the Study

Observations indicate that classroom practices of teachers in Nigeria do not support inclusive education. If teachers, who supposedly should be the implementers of inclusive education are lacking the necessary knowledge and skills, then the problem of realizing the goals of UBE and meeting the target of education for all will remain a mirage. The broad questions to answer then are, 1) To what extent do teachers and administrators possess the requisite knowledge and skills for implementing inclusive education in Nigeria? (2) What are the training needs of teachers and administrators for implementing inclusive education? (3) To what extent do teachers and administrators differ in the knowledge and skill competencies they possess? This study sought to find out the training needs of teachers and administrators for the effective implementation of inclusive education in Nigeria.

Considering the fact that teachers and administrators in the secondary schools are key service providers in teaching students' inclusive classrooms, assessing their training needs and support are obvious. Therefore, the purpose of this study is to investigate the training needs of teachers and administrators in the management of inclusive education in secondary schools in South East Nigeria. Specifically, the study aimed to find out

1. Knowledge and skill competencies possessed by teachers and administrators for implementation of inclusive education in Nigeria.
2. Areas of training needs of teachers in the management of inclusive education in classrooms in Nigeria.
3. Areas of training needs of administrators in the management of inclusive education in secondary schools in Nigeria.
4. Whether there is a significant difference in the mean responses of teachers and administrators in the knowledge and skill competencies they possess

Research Questions

1. What knowledge and skill competencies do teachers and administrators possess for implementation of inclusive education in secondary schools?
2. What knowledge and skill competencies do administrators possess for the implementation of inclusive education in secondary schools?

3. What areas do teachers need training for implementation of inclusive education in the classrooms in Nigeria?
4. What training is needed by administrators in the management of inclusive education in secondary schools?

To further strengthen the findings of the study, the following hypothesis was postulated and tested at .05 level of significance:

Ho1: There is no significant difference in the mean response of teachers and administrators in the knowledge and skill competencies they possess for implementation of inclusive education in secondary schools in Nigeria.

Method

A cross-sectional survey research design was adopted in identifying knowledge and skill competencies possessed by teachers and administrators for implementation of inclusive education in secondary schools in Nigeria as well as their areas of training needs. The population comprised all the teachers and administrators in the public secondary schools in South East Nigeria. The Cluster sampling technique was adopted for sample selection. The first stage of the sampling was random selection of three states out of the five states (Abia, Anambara, Ebonyi, Enugu and Imo) in South East Nigeria. The second portion of the sampling involved the selection of two Local Government Areas (L.G.A) from the three states (Anamabara, Ebonyi and Enugu). Three public secondary schools were selected from each of the six Local Government Areas at the third stage sampling. A total of 18 public secondary schools were therefore selected. Finally, 305 teachers and 45 administrators totaling 350 constituted the sample of study (159 females and 191 male).

The two instruments used for data collection are Inclusive Education Training Needs Analysis Questionnaire (IETNA_Q) and Inclusive Education Training Needs Interview Schedule (IETN_IS). The two instruments were developed after extensive review of literature (Catholic Relief Services, 2010; Gonzalez-Gil, Martin-Pastor, Flores, Jenaro, Poy & Gomez-Vela, 2013; McManis, 2017) on the conception of diversity and education; education policy; organization and management of inclusive schools and classrooms; practices; resources and support; leadership; curriculum design and development; team work, community involvement, and inclusive education methodologies. The choice of selecting IETNA and IETN_IS was based on the fact that they are commonly used instruments for capturing in the field. Secondly, these instruments were elected for their simplicity and effectiveness and they have previously been used by ABC (2016), and ECD (2010). The questionnaire consists of 66 items distributed in three sections A, B and C. Section A consists of 4 items that sought information on the teachers' and administrator's personal data such as State, Local Government Area (L.G.A), type of school (rural and urban), gender. Section B consists of 20 items that require the respondents to check 10 topics that reflect the most important training and development needs for effective implementation of inclusive education in their schools. Section C consists of 40 items on knowledge and skill competencies possessed by the teachers and administrators for implementing inclusive education in secondary schools in South East Nigeria. The items focus on communication, collaboration, use of resources and technology, managing inclusive classrooms, applying inclusive education methodologies, using and managing special equipment and resources and providing leadership, among others. Section C requires the respondents to make response using the following 5-point rating scale: 1=No knowledge/skill; 2=A little knowledge/skill but considerable development needed; 3=Some knowledge/skill but development required; 4=Good knowledge/skill possessed, but need a little

development; 5= Fully knowledgeable/skilled, requires very little or no development; and to tick N/A if a competency is not applicable to the teacher's or administrator's job in inclusive education setting. A free space was provided for comments regarding training needs and competencies at the end of Sections B and C.

The Inclusive Education Training Needs Interview Schedule (IETN_IS) consists of 4 broad questions with probes that focused on conceptual understanding of inclusive education, manipulation of facilities that are available in school for implementing inclusive education, and the challenges encountered in the implementation of inclusive education whether or not the teachers and administrators have been involved in special needs training since the introduction of inclusive education.

The content validity of the instruments was established by subjecting them to scrutiny of three experts in Special Education, Educational Administration, and Measurement and Evaluation to determine their adequacy in content, comprehensiveness and clarity of the items. Their suggestions and comments guided the researchers in the final revision of the items. Cronbach alpha method was used to establish the internal consistency reliability of the questionnaire and the coefficient reliability value of 0.84 obtained was highly adequate.

The instrument was administered to the teachers and administrators by the researchers with the aid of 6 research assistants. The research assistants were trained through the pilot test. The data collected were coded and analyzed using the Statistical Package for Social Sciences (SPSS). Data for answering the research questions were analyzed using percentages, mean, standard deviation and t-test for independent sample statistical techniques. Qualitative data obtained were analyzed for the purpose of identifying themes that emerged from the interview data and was used in the discussion of findings.

Results

Table 1 indicates that the mean responses of teachers on knowledge and skill competencies they possess in managing instruction and management, and managing and using equipment in inclusive education setting ranged from 2.98 to 3.63, while the standard deviation ranged from 1.14 to 1.47. The Table shows that the teachers mean perception scores were higher than the criterion cut-off of 3.00 in all items except one (item 32, managing and use of crutches) under the management and use of equipment. This finding suggests that the teachers perceived themselves as having most of the requisite knowledge and skills required for implementation of inclusive education in secondary schools, but need a little development.

Table 1

Mean Responses of Teachers on Knowledge and Skill Competencies Possessed for Implementation of Inclusive Education in Secondary Schools

S/N Knowledge and Skill (n=305)	Mean	SD
A. Managing Instruction		
1. Communication with student in inclusive classroom	3.52	1.40
2. Engaging in collaborative planning and teaching	3.63	1.32
3. Reducing stereotype threats among students	3.55	1.22
4. Applying strategies for inclusive education	3.58	1.24
5. Using resources on diversity in inclusive setting	3.52	1.18
6. Facilitating conversation in inclusive setting	3.48	1.14

7. Managing time in an inclusive setting	3.46	1.19
8. Designing and planning lessons	3.44	1.16
9. Planning assessment and feedback	3.34	1.18
10. Developing strong behavior management plan	3.40	1.24
11. Using multiple ways to represent content to students	3.34	1.25
12. Attending to every student's diversity	3.34	1.25
13. Using technology to meet diverse needs	3.36	1.26
14. Valuing learner diversity	3.51	1.17
15. Grasping the concept of inclusive education	3.35	1.25
16. Sharing information and experiences with other teachers	3.36	1.26
17. Devising individual learning programmes	3.39	1.30
18. Monitoring and assessing progress	3.39	1.19
19. Making and using appropriate teaching and learning materials	3.48	1.19
20. Learning how to successfully manage team performance	3.48	1.15
21. Knowing how to successfully manage resistance to change	3.39	1.20
22. Knowing how to be more flexible and open to new ideas	3.46	1.15
23. Knowing how to use special equipment for teaching	3.39	1.19
24. Dealing effectively with distractions and interruptions	3.44	1.14
25. Using active learning approaches	3.44	1.26
B. Management and Use of Equipment		
26. Managing and using braille	3.01	1.47
27. Managing and using brailled textbooks	3.10	2.22
28. Managing and using audiometers	3.13	1.37
29. Managing and using speech trainers	3.11	1.38
30. Managing and using braille reader	3.08	1.45
31. Managing and using talking watches	3.07	1.43
32. Managing and using crutches	2.98*	1.41
33. Managing and using abacus	3.09	1.39
34. Managing and using audio-visual equipment	3.22	1.39
35. Managing and using ear molding machines	3.44	1.26

Note: *Mean<3.00

Table 2 shows that the mean responses of administrators on knowledge and skill competencies they possess in managing instruction, management and use of equipment, and management of teachers in inclusive education setting ranged from 2.80 to 3.84, while the standard deviation ranged from 0.97 to 1.44. The Table shows that the administrators mean perception scores were higher than the criterion cut-off of 3.00 except in nine out of the 40 identified competencies (items 12, 13, 18, 21, 23, 32, 35, 37, & 39). This finding suggests that the administrators perceived themselves as having many of the requisite knowledge and skills required for managing implementation of inclusive education in secondary schools, but need considerable development in attending to every student's diversity, using technology to meet diverse needs,

monitoring and assessing progress, knowing how to successfully manage resistance to change, knowing how to use special equipment for teaching, managing and using crutches, managing and using ear molding machines, knowing how to act as an inspirational role model for teacher, and understanding how to coach and mentor others.

Table 2

Mean Responses of Administrators on Knowledge and Skill Competencies Possessed for Implementation of Inclusive Education in Nigeria

S/N Knowledge and Skill (n=45)	Mean	SD
A. Managing Instruction		
1. Communication with student in inclusive classroom	3.67	1.44
2. Engaging in collaborative planning and teaching	3.76	1.31
3. Reducing stereotype threats among students	3.78	1.27
4. Applying strategies for inclusive education	3.73	1.11
5. Using resources on diversity in inclusive setting	3.47	1.05
6. Facilitating conversation in inclusive setting	3.40	1.21
7. Managing time in an inclusive setting	3.31	1.34
8. Designing and planning lessons	3.04	1.38
9. Planning assessment and feedback	3.84	1.38
10. Developing strong behavior management plan	3.16	1.31
11. Using multiple ways to represent content to students	3.07	1.13
12. Attending to every student's diversity	2.96*	1.24
13. Using technology to meet diverse needs	2.98*	1.25
14. Valuing learner diversity	3.04	1.22
15. Grasping the concept of inclusive education	3.13	1.03
16. Sharing information and experiences with other teachers	3.02	1.11
17. Devising individual learning programmes	3.07	0.96
18. Monitoring and assessing progress	2.89*	1.15
19. Making and using appropriate teaching and learning materials	3.20	1.12
20. Learning how to successfully manage team performance	3.13	1.12
21. Knowing how to successfully manage resistance to change	2.91*	1.14
22. Knowing how to more flexible and open to new ideas	3.11	1.09
23. Knowing how to use special equipment for teaching	2.80*	1.23
24. Dealing effectively with distractions and interruptions	3.16	0.97
25. Using active learning approaches	3.13	1.17
B. Management and Use of Equipment		
26. Managing and using Brailier	3.11	1.07
27. Managing and using Brailled textbooks	3.20	1.05
28. Managing and using audiometers	3.27	1.09
29. Managing and using speech trainers	3.20	1.01
30. Managing and using Braille reader	3.18	1.13
31. Managing and using talking watches	3.13	1.01
32. Managing and using crutches	2.87*	1.23
33. Managing and using abacus	3.07	1.05
34. Managing and using audio-visual equipment	3.13	1.17
35. Managing and using ear molding machines	2.96*	1.18
C. Management of Teachers by Administrator		
36. Understanding how to communicate vision to teachers	3.07	1.25
37. Knowing how to act as an inspirational role model for teacher	2.91*	1.29
38. Knowing how to instill accountability with teachers	3.00	1.29
39. Understanding how to coach and mentor others	2.93*	1.30
40. Knowing how to delegate tasks appropriately	3.02	1.30

Note: *Mean<3.00

Table 3 shows the percentage response of teachers identifying the 10 top areas of training needs for implementation of inclusive education. The percentage responses of the teachers ranged from 58.36% to 73.77%. The Table suggests that teachers need training and development in the areas of organization and management of inclusive school and classroom, community participation, conceptual understanding of inclusive education, curriculum design and development, inclusive teaching methodologies, working in teams, use of special equipment and facilities, factors that support or hinder inclusion, as well as how to implement inclusive methodologies in school.

Table 3
Percentage Response of Teachers on Areas of Training Needs for Implementation of Inclusive Education

Area of Training Need	N	Percentage	Rank
Organization and management of school and classroom	225	73.77	1
Community involvement and participation in inclusive education	220	73.13	2
Conceptual understanding of diversity in education	216	70.81	3
Curriculum design and development	208	68.19	4
Conceptual understanding of inclusive education	206	67.54	5
Inclusive education teaching methodologies	200	66.55	6
Collaboration and working in teams in an inclusive setting	201	65.90	7
Use of special equipment and facilities	192	62.95	8
Factors in the school setting that support or hinder inclusion	187	61.31	9
How to implement inclusive education methodologies in school	178	58.36	10

Table 4 shows the percentage response of administrators identifying the 10 top areas of training needs for implementation of inclusive education. The percentage responses of the administrators ranged from 64.44% to 82.22%. The Table suggests that the administrators need training and development in inclusive resources, distribution and utilization, how to meet diverse needs of students, curriculum design and development, policy framework for adoption of inclusive education in Nigeria, understanding of unique attributes of persons/students with special education needs disabilities, factors that support or hinder inclusion, organization and management of school and classroom, community participation, conceptual understanding of diversity and inclusive education, working in teams, use of special equipment and facilities, role of management, existence and responsibilities of leaders. Other areas of need are transforming classroom practices and activities to meet diverse educational needs of students, how to implement inclusive methodologies in school, and use of special equipment. It can therefore be deduced from the different areas of needs that the administrators need to develop their knowledge and skill competencies required for managing instruction, human and material resources for implementation of inclusive education in secondary schools.

Table 4
Percentage Response of Administrators on Areas of Training Needs for Implementation of Inclusive Education

Area of Training Need	N	Percentage	Rank
Inclusive education resources, distribution and utilization	37	82.22	1

How to meet diverse educational needs of students in inclusive setting	33	73.00	2
Curriculum design and development	32	71.11	3
Policy framework for adoption of inclusive education in Nigeria	31	68.88	4
Understanding of unique attributes of persons/students with special education needs disabilities	31	68.88	5
Factors in the school setting that support or hinder inclusion	31	68.88	4
Organization and management of school and classroom	31	68.88	4
Conceptual understanding of diversity in education	30	66.66	8
Conceptual understanding of inclusive education	30	66.66	8
Community involvement and participation in inclusive education	29	64.44	10
Role of management, existence, importance and responsibilities of leaders	29	64.44	10
Transforming classroom practices and activities to meet diverse educational needs of students	29	64.44	10
How to implement inclusive education methodologies in school	29	64.44	10
Use of special equipment and facilities	29	64.44	10

An independent samples t-test was conducted to compare mean responses of teachers and administrators' knowledge and skill competencies possessed in managing instruction in an inclusive setting, management and use of equipment and overall competencies. There was a significant difference in the mean responses of teachers (M= 86.90, SD= 14.09) and the administrators (M= 79.76, SD = 14.09); $t(348) = 3.175$, $p = .002$ in managing instruction. However, the difference in the mean responses of the two groups in management and use of equipment as well as overall knowledge and skill competencies were not significant as shown in Table 5. These results suggest that teachers perceived their competencies higher in management of instruction than the administrators.

Table 5

Comparison of Mean Difference the responses of teachers and administrators in knowledge and skill competencies possessed for implementation of inclusive education in secondary schools

Variable	Group	N	Mean	SD	Df	T	P value
Managing Instruction	Teacher	305	86.90	14.09	348	*3.175	.002
	Administrator	45	79.76	14.09			
Management and Use of Equipment	Teacher	305	30.94	10.57	348	-.0106	.916
	Administrator	45	31.11	7.62			
Overall Competences	Teacher	305	134.30	19.12	348	-0.040	.968
	Administrator	45	134.42	17.54			

* $p < .05$

Discussion

The essence of this study was to assess the training needs of teachers and administrators in the implementation of inclusive education in Nigeria. The findings from the quantitative data showed that teachers understand clearly the concept of inclusive education and what it involves. This finding is inconsonant with the findings Memisevic & Hodzic (2011), Ogba & Igu (2011) that

teachers are key in the teaching and practice of inclusive education hence, their support and their willingness to ensure its full implementation. The finding contradicts the findings of an earlier study by Avramidis, Bayliss and Burden (2000) who found out that in practice teachers are not prepared for inclusive education. The overall picture that emerged through qualitative data by the three participants interviewed is that inclusive education incorporates student diversity.

Inclusive education is directed toward children with special needs. It is meant to enable children from different background and in the same age group to school together. It is an educational programme that rejects total exclusion and segregation of students with special needs in an education environment. (Avramidis, Bayliss and Burden, 2000).

The implication of this finding is that teachers possess good background knowledge and skills that will enhance instruction. Although, their responses on their training needs revealed that they need some support and development.

The result in Table 2 shows that administrators possess considerable knowledge and skill competencies for implementation of inclusive education in South East Nigeria. However, they need considerable development and skills in attending to every student's diversity, using technology to meet diverse needs, monitoring and assessing progress, knowing how to manage resistance to change successfully, knowing how to use special equipment for teaching. The lack of competencies of administrators in the qualitative data on skills and knowledge possession emerged as a theme in excerpts from the interview transcript. Four participants confessed that . . . "no awareness on the issue of diversity, supporting students' needs is difficult, collaboration and team work are not enhanced, there was no training on how to value learners diversity in an inclusive class" This result is in tandem with the report of Ashi (2010) Secer (2010) that there is a lack of well-trained teachers to actualize the aim of inclusive education.

This is in line with the findings of De Boer et al. (2011), and Shani and Ram (2015) that there exists gap between the desire for inclusion and what actually occurs in its practice. Supportively, Ajuwon (2008) had warned that for inclusive education to be actualized, teachers and principals need to be imparted with skills, attitude, and knowledge that will propel effective management of both classroom and school activities. The implication of the finding is that training and professional development of secondary school administrators are significant components in the management and actualization of inclusive education in the whole of South East Nigeria in general

Evidence from the finding of quantitative data in Table 3 suggest, that training and development are required in the areas of organization and classroom management, community participation, curriculum development teaching methodologies, working in teams, use of special equipment and facilities in the inclusive class. This finding agrees with the reports of Igwe. 2017, along with Ogba and Igu (2013), that despite the Nigeria Government's action of signing the treaties and legislation for the inclusive education, its implementation seems to be leap forging as there is inadequate provision for development and motivation of teachers and administrators. The Global Campaign for Education (2012) and Ntombela (2011) reported that lack of well-trained teachers who are adequately managed and supported is a bane to the actualization of education at all levels. Continuing professional development emerged as a theme from the interview of five participants as shown in the interview extract. A Participant said: "I have not under gone any training on inclusive education strategy for 10 years of my teaching career, in-service training is not frequently organized, meeting on the importance of inclusive, no seminar on the concept and conference are really planned" The above showed that there is a gap between having the desire to teach in an inclusive classroom and what actually occurs in the practice (De Boer, Pijl, Minnaert;

Shani & Ram, 2015). Implicitly, when adequate provision is not made for teachers to acquire more training it is an indication that acquainting them with new knowledge, skills and innovation that will enhance the attainment of expected goals in inclusive education will be a mirage.

Table 4 findings reveal that the administrators need training and development in the areas of resource distribution and utilization, management of student's diverse needs and their unique personalities, designing curriculum, methodologies, and use of special equipment in an inclusive education. Therefore, the deduction from the finding shows that the administrators need to develop their knowledge and skill competencies required for managing instruction, human and material resources for implementation of inclusive education in secondary schools. General lack of knowledge of teaching methods emerged as a theme. Five participants who were among those interviewed said:

they have attended training on computer application, on teaching and learning strategies, quality assurance on how to set examination questions, accounting system, retraining of teachers on curriculum design” One participant specifically said “I attended training organized by peace house education on the enhancement of teachers’ quality in 2017 which has no correlation with inclusive method of teaching.

This is in line with individual reports of Malale & Zwane, (2018); Taeachaisupapong, (2014) that insufficient training of teachers has led to low morale, stress and negative attitudes of them towards children with special needs. The 2017 training referenced by the participant above is mainly on general teaching technique and ethics of teaching profession which has no connection with academic knowledge of inclusive skills and methods. Probing further on whether any knowledge was derived from the already attended workshops, the participants answered in affirmation that they actually gained new knowledge but not profitable in teaching children with special needs. The finding is in alignment with the reports of Obi and Ashi, (2016) that inadequately trained personnel and inadequate materials are responsible for poor implementation of inclusive education in Nigeria. McManis (2017) reiterated in his research that for inclusive education to function, administrators need to be provided with training that will make them effective and efficient in managing and manipulating both human and available instructional materials. The implication is that if administrators lack in their administrative and instructional roles which are essential components in the achievement of inclusive educational goals, then attainment will be highly jeopardized.

Comparing the mean differences in the responses of teachers and administrators in the knowledge and skills competencies reveals a significant difference in favor of the teachers. However, the difference in the mean responses of the two groups in management and use of equipment as well as overall knowledge and skills not were significant as shown in Table 5. This finding is not surprising since teachers are in constant contact with the students in the classroom hence, they have better understanding of how to teach students in inclusive setting. This result synchronizes with the opinions of some researchers on the need for teachers who directly give instructional pedagogies and administrators who have the onerous responsibility of managing human and material resources to receive training accordingly. This will make them effective and efficient in the discharge of their respective duties (Cook, 2001; Kern, 2006; Igwe, 2017; OECD, 2011; Taweechaisupapong, 2014).

The limitation of this study was that it was conducted in the South East region in Nigeria. However, school districts and regions with similar characteristics may benefit from the findings for immediate use.

Recommendations

This recommends thus: that there should be advocacy through an awareness campaign on inclusive education for teachers and administrators to vigorously show commitment to inclusive education in Nigeria.

Periodical training in the form of in-service, seminars, workshops and conferences should be organized for both the teachers and administrators by the government and NGOs to enable them master the skills to teach, communicate, manage an inclusive education as well as keep them abreast of the needed changes and innovation in inclusive education.

Conclusion

The study explored the training needs of teachers and administrators in the implementation of inclusive education in South East Nigeria. The purpose was to provide a framework for determining baseline requirements for support of inclusive learning and the training needs for the attainment. The result showed generally, that teachers support the concept of inclusive education more the administrators do. In fact, the findings of the study show that teachers have some understanding of the concept of inclusive education but training needs to be provided for them to gain more insight on skills to promote communication in an inclusive class, and assessment skills to monitor children's performance and their needs. Secondly, teachers and administrators, as exposed by the study, need professional development periodically to gain knowledge on current trends on approaches for educating children with disabilities, their rights and potentials. Based on the findings, this study concludes that the implementation of inclusive education in Nigeria has not been fully consistent but partial as there is evidence of inadequate possession of knowledge and skills by teachers and administrators who are supposed to provide instructions, build team work by collaboration, understand the value and needs of each individual child in an inclusive setting. This shows that for inclusive education to be realized, there is need to provide teachers and administrators adequate professional development that will equip them with knowledge and skills to achieve the expected goals. The study has therefore made a useful contribution by providing empirical evidence that can be used as baseline for addressing problems associated with poor teaching and learning in an inclusive education classroom in Nigerian secondary schools.

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An Examination of the Impact of Educational Leadership Field Experience Structure on Instructional Leadership Preparedness

This manuscript has been peer-reviewed, accepted, and endorsed by the International Council of Professors of Educational Leadership (ICPEL) as a significant contribution to the scholarship and practice of school administration and K-12 education.



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This pilot study investigated the relationship between principal preparation program (PPP) field experience structure and principal instructional leadership preparedness as measured by state certification exams and state-wide student assessment results. The researchers sought to determine if a statistically significant difference existed in principal certification examination scores between principals who completed part-time practicums while maintaining their classroom teaching duties and principals who completed a year-long, full-time internship as part of their PPP. Further, the researchers sought to determine the impact on school-wide student achievement scores for both groups of principals during their first year in a principalship. Findings indicated a statistically significant difference in median state leadership licensure examination scores between the two groups, with internship principals (IP) scoring significantly higher than practicum principals (PP). Other findings indicated, both, PPs and IPs positively impacted SA levels in their first year as principal with schools led by PPs making higher gains in school-wide student achievement scores and schools led by IPs meeting school-wide growth, as measured by the state accountability model, at a higher rate. These findings may aid key constituents in re-envisioning the structure of their current field experiences and re-examining preparation practices to explore innovative methods to prepare school leaders who are trained for the complexity of today's principal role.

Keywords: leadership, educational leadership, principal preparation, principal certification, school improvement, program evaluation

Since the creation of the principal's position, the role of principal has evolved from the *keeper of the keys*, chiefly responsible for building maintenance and discipline, to one of the integral *keys to student success*. Today's principals are responsible for a multitude of areas that impact the achievement of all students including curriculum planning and supervision, managing funds, ensuring legislative compliance, implementing reforms, and most notably, instructional leadership (Johnson, 2016; Pannell, Peltier-Glaze, Haynes, Davis, & Skelton, 2015). Educational leadership preparation programs are charged with the immense task of preparing instructional leaders with the knowledge and skills to lead schools to increased student achievement; however, a vast body of research spanning nearly two decades indicates educational leadership training programs have failed to keep pace with the evolving principal's role (Duncan, Range, & Scherz, 2011; Hernandez, Roberts, & Menchaca, 2012; Hess & Kelly, 2007; Lashway, 1999; Levine, 2005; Lynch, 2012; Miller, 2013; Pannell et al., 2015; Reed & Kinsler, 2010; Zubnycki, 2013).

In the United States, educator licensure requirements vary from state to state, and principal preparation practices vary among colleges, universities, and alternative preparation programs. According to Hernandez et al. (2012), researchers in the field of educational leadership have declared the quality of leadership provided by school and district leaders is highly dependent upon the quality of their leadership preparation experiences, and the majority of school leaders are not equipped to successfully assume the responsibilities the job requires (Johnson, 2016). Highlighted discrepancies between preparation and practice along with increased accountability of the principal has forced colleges, universities, alternative preparation programs, and departments of education to re-examine preparation practices and begin exploring innovative methods to prepare school leaders who are prepared for the complexity of today's principal role.

Purpose of the Study

The purpose of this study was to examine the relationship between principals' educational leadership program field experience structures and instructional leadership preparedness. The study sought to determine if a statistically significant difference existed in principal certification examination scores between principals who completed part-time practicums while maintaining their classroom teaching duties and principals who completed a year-long, full-time internship as part of their principal preparation program. Further, the study sought to determine the impact on school-wide student achievement for both groups of principals during their first year in a principalship. The study examined gains and losses in school-wide student achievement scores for each group of principals using the previous administration's school-wide student achievement score as a baseline to calculate school-wide student achievement score (SA) differentials for each participant. Additionally, the study examined the percentage of schools meeting school-wide growth residual expectations set forth in the state accountability model.

Specifically, this study sought to answer the following research questions:

1. Is there a statistically significant difference in principal licensure examination scores between principals who completed a part-time practicum and principals who completed a full-time internship during their educational leadership preparation program?
2. Is there a relationship between field experience structure and principal impact on student achievement during the first year of the principalship?

Significance of the Study

Past research contends principal leadership may be the second most influential factor in student achievement, surpassed only by the effect of the classroom teacher (Joyce & Showers, 2002; Lynch, 2012; Marzano, Waters, & McNulty, 2005; Mendels & Mitgang, 2013; Miller, 2013). According to Davis and Darling-Hammond (2012), principal leadership may explain as much as 25% of the variation in student learning attributed to school-related factors. With so much effect on student outcomes, it is essential educational leadership preparation programs equip principals with the knowledge and skills to lead schools to increased student achievement.

This study could be significant to university faculty and staff as they prepare future school leaders and design field-based experiences for their respective programs. Additionally, other colleges, universities, departments of education, and alternative preparation programs could draw on this study as they develop, evaluate, and enhance PPPs. The study could also be significant to school districts and practicing administrators as they plan and participate in professional development for school leaders.

Conceptual Framework

Much has been written about the increasing complexity of the principal's role and the challenges of preparing school leaders who are ready to face the challenges present in today's schoolhouses. Leadership can be the single most impactful factor in moving schools forward because leaders either directly or indirectly influence every aspect of the schoolhouse. Augustine-Shaw and Reilly (2017) asserted that leadership practices have a strong, measurable effect on student achievement, teaching quality, and school climate and culture. The authors noted leadership sets conditions and expectations for excellent instruction and a culture of ongoing learning for both students and educators.

Young (2019) noted that, although the demands for principals continue to mount, support systems for novice principals have not changed or received significant momentum. However, preparing good leaders depends not only on creating strong support structures during early years of practice, but providing quality initial professional learning. Augustine-Shaw and Reilly (2017) asserted one way to build capacity in novice principals is through effective mentoring practices. Principal preparation programs could help reduce the initial gaps in knowledge and skills, or the leadership gap, of novice principals by incorporating meaningful, effective mentoring practices during the course of training new principals. Many principal preparation programs currently utilize a practicum course structure where candidates choose a mentor to serve as a reference or support on pre-assigned tasks, either during coursework or during the practicum experience. These tasks are often not relevant to the candidate's school or setting, and this disconnect could contribute to feelings of inadequacy of new principals, dissatisfaction with principal preparation programs, and to the argument that principal preparation is disconnected from reality. Additionally, Augustine-Shaw and Reilly (2017) argued that these *buddy-type* mentorships, while typically well-intended, lack robust components that have meaningful impact on long-term development and often do not encourage reflective practice or include the training necessary to coach new principals. Consequently, Young (2019) argued that effective principal mentoring relationships could serve as a catalyst for on the job professional development and support the novice principal's ability to fulfill the expectations and professional responsibilities of their role.

Review of the Literature

Current Perspectives of School Leadership

While the notion of school leadership often encompasses activities undertaken by teachers, community groups, and site-based teams, Kafka (2009) contends school leadership usually refers to the work of the principal, and times have changed for those becoming principals. No longer do good management skills and a deep understanding of the school and community equate to an effective principal. Fleck (2008) argued today's principals are expected to be experts in all aspects of administration, leadership, and education. In several states, principals of underperforming schools may even be removed from their jobs (Davis & Darling-Hammond, 2012).

As research has revealed the effects leadership could have on student achievement, lawmakers and policymakers have gained an increasing interest in public education and the principal's role. Leading the way in the shift in the role of the principal to an instructional leader was the National Commission on Excellence in Education's (1983) report, *A Nation at Risk: The Imperative for Educational Reform* and a growing body of research on effective schools. In 2001, the federal government passed the No Child Left Behind (NCLB) Act, the reauthorization of the Elementary and Secondary Education Act (ESEA) of 196. More recently, in 2015, NCLB was reauthorized as the Every Student Succeeds Act (ESSA). With the passage of these legislative acts, schools have become increasingly accountable for student achievement, and the principal's role has evolved to a new level of complexity.

Twenty-first century principals are charged with a substantial number of tasks. Duncan et al. (2011) asserted the principal position has expanded to encompass the roles of educational visionary, instructional and curriculum leader, assessment expert, disciplinarian, community builder, public relations and communication expert, budget analyst, facility manager, special programs administrator, as well as overseer of legal, contractual, and policy mandates. With the number and complexity of responsibilities bestowed on today's principals comes increased pressure to principals as well as the establishments who prepare them for the role.

Perhaps a more confusing topic than how to effectively prepare principals has been how to effectively evaluate them. Inconsistent definitions of principal effectiveness and role responsibilities have contributed to a wide variety of approaches to evaluating school leaders; however, educational accountability reform has generated much interest in the effectiveness of school leadership. Practitioners and researchers continue to explore the best ways to measure effective leadership (Pannell, White, & McBrayer, 2018).

According to Fuller & Hollingsworth (2014), little empirical research exists on principal evaluation, and as recently as 2010, few states had comprehensive evaluation systems for school leaders; however, to request flexibility from certain provisions of federal legislation, many states have developed principal evaluation systems that included student achievement data as a measure of principal evaluation (Canole & Young, 2013). While many states incorporate outcome data on high stakes student assessments in their current principal evaluation systems, the notion of measuring principal effectiveness with student achievement results remains a controversial issue. Proponents of using student outcome data as a means to evaluate school leaders argue that, while the principal may not directly impact student achievement scores, the workings of the principal impact many factors that could have a significant impact on student achievement (Clifford, Behrstock-Sherratt, & Fetters, 2012). Those who oppose using student outcome data as a means to evaluate the effectiveness of school leaders argue against the validity of measuring principal

effectiveness with student outcome data because these assessments were designed to measure student learning, not effective principal performance (Mendels, 2012). Additionally, these opponents argue the principal has only indirect control over many factors that affect student test scores and support the use of elements over which the principal has more direct control, such as effective leadership behaviors and practices, as a means of principal evaluation (Mendels, 2012; Spiro, 2013). Further, Piro, Wiemers, and Shutt (2011) argued against using student achievement scores for principal evaluation since many student populations are made up of children with similar demographic characteristics, thus rendering the generalizability of the results impractical. Despite the discrepancies, a growing body of research on principal effectiveness supports the use of high stakes student assessment data as a component of principal evaluation (Clifford et al., 2012; Clifford, Hansen, & Wraight, 2014; Grissom, Kalogrides, & Loeb, 2015; Pannell et al., 2018).

Public School Accountability

Many consider the No Child Left Behind Act (NCLB), passed in 2001, a radical attempt at education reform. NCLB brought increased federal funding to lower socio-economic school districts in an attempt to close achievement gaps related to poverty. With this increased funding came a new level of accountability for student achievement in the form of standardized testing. States that received federal funds were required to develop a statewide student assessment system that included a mandatory testing program for elementary and secondary students. Students were to be assessed every year in both reading and math during grades three through eight, and once during their high school years. NCLB mandated students be assessed in science three times during their K-12 academic career, once in elementary school, once in middle school, and once in high school. Further, states were required to report disaggregate results of performance data, based on race and economic level subgroups, on these assessments.

Results from the mandatory statewide student testing program in one southern state served as the sole basis for the federal and state school accountability label. Every year, each student was assigned a label based on their performance on the mandatory state assessments for that year. Labels, in ascending order, were Advanced, Proficient, Basic, and Minimal. Schools were awarded points for each student scoring in the top three categories: three points for advanced, two points for Proficient, and one point for Basic. No points were awarded to the school for students scoring Minimal. In addition to the assigned label, student growth residuals based on the previous year's assessment were calculated for every student each year, and each student received a label related to growth: Met or Not Met. The state department of education assigned each school an accountability label based on a formula that calculated the school-wide student achievement scores in terms of percentage of students in each category and percentage of students meeting academic growth requirements.

Principal Preparation: Criticism and Change

The role of principal preparation programs is to equip participants with the knowledge and skills to meet the demands of school leadership roles (Duncan et al., 2011; Hernandez et al., 2012); however, educational leadership preparation views have changed faster than PPPs can keep up (Reed & Kinsler, 2010; Miller, 2013; Zubnzycki, 2013). Traditionally, college and university programs offered classes, which teachers aspiring to become principals could take at night, to learn to manage the day-to-day operations of a school building (Olson, 2007). The author noted classes

were often taught in isolation and accompanied by little to no practice at the skills being taught. Though the principal's role has changed, little has changed in principal preparation practices. Most university educational leadership programs still offer classes at night and/or on weekends for those who aspire to be principals, and these classes are often taught in isolation, accompanied by little to no practice at the skills being taught. Many principals feel traditional university preparation programs failed to adequately evaluate and revise programs to prepare them for the new, more complex principalship.

Research conducted over the past two decades revealed that nearly two-thirds of principals believe that traditional graduate leadership programs are out of touch with today's realities (Darling-Hammond, LaPointe, Meyerson, & Orr, 2007; Farkas, Johnson, & Duffett, 2003; Guerra, Zamora, Hernandez, and Menchaca, 2017; Johnson, 2016). Lashway (1999) and Levine (2005) contended, university PPPs had low admission and graduation standards, irrelevant and insignificant coursework, and inadequate clinical instruction. Faculties of educational leadership programs have come under fire for lack of practical experience in the field, noting that only six percent of educational leadership faculty had principal experience and only two percent had served as superintendents (Pannell et al., 2015). This lack of experience leaves faculty ill-equipped to design relevant practical experiences for candidates thus leading to gaps between knowledge and practical application skills.

Further, the United States Department of Education's Office of Innovation and Improvement (OII) faulted PPPs for inadequate recruitment process leading to self-selection of leadership candidates, insufficient screening processes, poor linkages between theory and practice, and failure to connect the program to the individual's projected career path and administrative placement and setting (Sanzo, 2016).

The disconnect between how principals are trained and the realities of today's principalship is forcing colleges, universities, policy makers, departments of education, and school districts across the nation to reexamine leadership preparation programs. Principal preparation programs place too much emphasis on lecture and theory and not enough emphasis on application; therefore, it is critical that PPPs become more innovative in their preparation practices (Guerra et al., 2017). Many PPPs have adjusted coursework to align with the complexity of the principal's role, including courses that focus on instructional leadership and supervision, diversity, and stakeholder engagement. Still, these adjustments may not be enough to close the leadership gap without sufficient opportunities to apply the knowledge in a real-world school setting.

Effective Principal Preparation

Research in the field of educational leadership supports the notion that the capacity of school leaders is highly dependent on their leadership preparation experiences, and research has identified several components as essential to effective principal preparation. Critical components of effective PPPs include enhanced entrance criteria (Kearney & Valdez, 2015), university courses focused on instructional leadership (Davis & Darling-Hammond, 2012, Southern Regional Education Board, 2009), and support for aspiring leaders provided thorough cohort models (SREB, 2009) as well as support after graduation for practicing school leaders (Kearney & Valdez, 2015).

Perhaps the most crucial component of effective principal preparation is a partnership between universities and school districts. University-district partnerships allow districts to identify candidates with the potential to become the type of leaders needed to address educational deficits, and universities gain greater access to quality candidates and reduce wasted resources often

associated with the self-selection process traditionally used in recruiting candidates (SREB, 2009). Further, these partnerships allow for a more meaningful and authentic field-based experiences. Field-based experiences help candidates construct new knowledge, facilitate opportunities for reflection regarding practice, use real-world experiences within the school and community to help candidates link theory to practice, and have the greatest impact when incorporated continuously throughout the program based on course content (Darling-Hammond et al., 2007). University-district partnerships afford mentors and university faculty the opportunity to work together to ensure field-based experiences are of high quality and include progressive opportunities to observe, participate in, and lead tasks relating to instructional improvement and school management (Davis & Darling-Hammond, 2012; Duncan et al., 2011; Guerra et al., 2017; Kearney & Valdez, 2015).

Current PPPs must find a systemic way to balance the transfer of knowledge gained through coursework with meaningful immersion in practice. A growing number of principal-preparation initiatives are forsaking university classrooms in favor of much more familiar training grounds: the schools and districts where those aspiring leaders will end up working (Pannell et al., 2015). Realizing the impact of field-based experiences on principal preparation some states, such as Georgia, have developed tiered levels of principal certification and increased the of required hours and types of acceptable field experience activities for the differing levels of principal certification. Other innovative preparation programs are replacing the traditional practicum experience with full-time internships to provide more authentic field-based experiences to aspiring principals.

Methodology

This pilot study investigated the relationship between the field experience structure of principal preparation programs (PPP) and instructional leadership preparedness. Specifically, it examined the relationship between field experience structure and principal licensure examination scores as well as the relationship between PPP field experience structure and principal impact on school-wide student achievement scores as measured by statewide standardized student assessment scores. The rationale for targeting this population is both groups completed principal preparation programs within the same university that offered identical courses yet differing field experience structures.

Participants

Participants in the study included principals from one southern state who served in a public school eligible to receive a state accountability rating and completed their educational leadership training at one southeastern university that housed two PPPs with differing field experience structures. Of the 61 total participants, 37 completed a 400-hour practicum during the entire length of the program in their current school while taking graduate coursework and maintaining their classroom teaching duties. Twenty-four participants completed a full-time fall semester internship and a full-time spring semester internship under different veteran principals at two schools while simultaneously completing graduate coursework. Both groups of principals completed the same instructional leadership coursework regardless of their field experience structure. Due to the manageable size of the population, no sample was chosen for this study. The statistical tests were conducted, and descriptive data were analyzed for the entire population.

Twenty-three participants were elementary school principals, 34 were secondary school principals, and four were principals of attendance centers, which serve kindergarten (K) through twelfth grade. The participant group in this study is highlighted in Table 1.

Table 1
Overview of Participants

Field Experience Structure	N	Elementary Principals	Secondary Principals	Attendance Center Principals
Practicum	37	12	22	3
Internship	24	11	12	1

Procedures

To identify participants relevant to the study, graduates were tracked through the university School of Education internal reports and the state department of education archived principals lists. Participants were assigned to one of two groups depending upon their PPP field experience structure. One group was comprised of graduates who completed practicum courses to satisfy field experience requirements for their educational leadership training. For this study, these participants are identified as Practicum Principals (PP). The other group consisted of graduates who completed an internship to satisfy field experience requirements for their educational leadership training and are identified as Internship Principals (IP).

Once the participants were identified, the researcher obtained permission to use principal licensure assessment data from each participant via an electronic consent form using Qualtrics and identified their school placements from the archived principals list provided by the state department of education for the relevant school year. The schoolwide student achievement scores (SA) for each participant's school for the years relevant to the study was collected from the public reports section of the state department of education website. The SA under the school's previous leadership was used as a baseline score, and SA differentials were calculated for each participant's first year in the principalship.

Descriptive statistical analysis of raw data was conducted and reported on participant SLLA scores, SA scores, and school-wide growth residuals. The nonparametric, Mann-Whitney U, test was conducted to determine if a difference in SLLA scores existed between the two groups. An independent samples *t*-test was conducted to determine if a difference in SA differentials existed between PPs and IPs in their first year in a principal role based on statewide student assessment results, and descriptive data were analyzed to examine growth residuals between principals whose schools met academic growth expectations and principals whose schools did not meet academic growth expectation as assessed by the statewide student assessment program.

The study was limited to the principals' first year in the principalship to reduce the risks of principal effectiveness being influenced by other factors not related to principal preparation and to gain a greater understanding of the impact of initial preparedness. It is also important to note SA differentials focus on growth rather than the actual SA score; therefore, participant measurements focused on positive and negative gains exclusive of the current school accountability label.

Results

An analysis of descriptive data revealed the two educational leadership programs produced a combined total of 163 graduates during the three-year timeframe of the study. Of the 134 graduates who completed a practicum, 39% (N = 53) moved into a district or school level administrator position while 97% (N = 28) of the 29 internship graduates moved into a district or school level leadership capacity. While no internship graduates (N = 0) returned to a classroom teacher position upon completion of their PPP, 42% (N = 57) of practicum graduates remained in the classroom. Eighteen percent (N = 24) of graduates who completed a practicum left K-12 public education in the state compared to 3% (N = 1) of internship graduates. Follow-up with the IP who left K-12 education in the state revealed the participant had moved to an executive role in an alternate route teacher preparation program. Table 2 provides a breakdown of graduates' roles after completing their respective program.

Table 2

Overview of PPP Graduates Job Roles by Field Experience (FE) Structure

FE Structure	N	District Leader	School Leader	Teacher	Other
Practicum	134	7	46	57	24
Internship	29	2	26	0	1
Total	163	9	72	57	25

Note: The "other" category for each program is inclusive of guidance counselors, higher education employees, and graduates working outside of K-12 public education in the state.

Of the 61 graduates who had assumed a principal role in a K-12 school eligible to receive a state accountability rating based results from the state-wide assessment system, thirty PPs and 20 IPs granted permission for their SLLA scores to be used in the study for research question one, yielding 81.1% and 83.3% participations rates respectively. The range of SLLA scores for PPs was 20, with a high score of 189 and a low score of 169 while the range of scores for IPs was 42, with a high score of 193 and a low score of 151. Results from an independent samples *t*-test indicated IPs ($M = 178.75$, $SD = 9.037$) scored 3.55 points higher than PPs ($M = 175.20$, $SD = 4.831$) on the SLLA.

An inspection of boxplots revealed six outliers in PP SLLA scores and one outlier in IP SLLA scores. All outliers were included in the statistical analysis as they were considered an accurate representation of the participants' instructional leadership preparedness as assessed by the SLLA. Further, results of the Shapiro-Wilk's test of normality (see table 3) revealed SLLA scores were not normally distributed in either group.

Table 3

Shapiro-Wilk Test of Normality Results for SLLA Scores

Field Experience Structure		Shapiro-Wilk		
		Statistic	df	Sig.
SLLA SCORE	Practicum	.821	30	.000*
	Internship	.896	20	.034*

Note: * indicates significance resulting in violation of normality

Due to the presence of outliers and violations of normality, a Mann-Whitney U test was run to determine if there were differences in SLLA score between PP and IPs because it is less sensitive to outliers and violations of normality than the independent samples *t*-test (Bors, 2018). Distributions of the SLLA scores for PPs and IPs were similar, as assessed by visual inspection of the population pyramid. School Leadership Licensure Assessment score was significantly higher in IPs (*Mdn* = 180.50) than in PPs (*Mdn* = 174.00), $U = 145$, $z = 2.117$, $p = .034$; therefore, the null hypothesis that the distribution of SLLA score is the same between PPs and IPs must be rejected.

Research question two explored principal impact on school-wide student achievement levels by exploring SA differentials based on the state-wide student assessments, using the previous administration's SA score as a baseline, and academic growth as assessed by the state accountability model, based on student growth residuals from students' prior assessment scores.

For first year measurements in SA differentials, there were 37 PPs and 24 IPs. The maximum gain in SA points of a first-year PP was (+)42 points while the greatest gain for a first-year IP was (+)27 points. The largest negative impact on SA of a first-year PP was (-)35 points while the largest negative impact on SA for a first-year IP was (-)29 points.

In their initial year in the principalship, PPs' *M* SA differentials ($M = 7.35$, $SD = 14.917$) were higher than internship principals' *M* SA differentials ($M = 2.42$, $SD = 11.695$). Schoolwide Student Achievement Score differentials for each field experience structure were normally distributed, as assessed by Shapiro-Wilk test ($p > .05$), and there was homogeneity of variance, as assessed by Levene's test for equality of variances ($p = .176$). Table 4 presents an overview of SA differentials for PPs and IPs, respectively, for their first year in the principalship.

Table 4

Schoolwide Student Achievement Scores (SA) Differentials by Field Experience (FE) Structure

FE Structure		<i>N</i>	range	<i>M</i>	<i>SD</i>
Practicum	YR 1	37	77	7.35	14.917
Internship	YR 1	24	56	2.42	11.695

Results from an *independent samples t*-test revealed PPs' *M* SA differential was 4.935 ($SE = 3.604$) points higher than internship principals' *M* SA differential in the first year in a principal role. Despite the higher *M* SA differential, there is no statistically significant difference in the *M* SA differential at the significance level of .05. The results are shown in Table 5.

Table 5

Independent t-Test Results for Year 1 SA Differential

SA Differential	<i>t</i>	<i>df</i>	Sig.	Mean Difference	Std. Error Difference	95% CI Lower Bound	95% CI Upper Bound
Equal Variances Assumed	1.369	59	.176	4.935	3.604	-2.277	12.146

Note: The mean difference is significant at the .05 level

Further inspection of statewide accountability reports revealed that schools led by IPs met growth on the statewide accountability model at a greater rate than schools led by PPs, 83.3% and 75.7% respectively. Table 6 presents school-wide growth residual results.

Table 6

School-wide Growth Residuals by Field Experience (FE) Structure

FE Structure	N	Met Growth	Did Not Meet Growth
Practicum	37	28	9
Internship	24	20	4

Discussion

The role of the principal in United States public schools has changed dramatically over the past few decades. The primary role of today's principal is to be an instructional leader for the school rather than a building manager, as they once were. With a vast body of research supporting the impact of school leadership on student achievement (Davis & Darling-Hammond, 2012; Joyce & Showers, 2002; Lynch, 2012; Marzano et al., 2005; Mendels & Mitgang, 2013; Miller 2013; Reames, 2010) it is imperative for principals to be knowledgeable of sound instructional practices and well equipped to balance a wide array of tasks and still maintain focus on teaching and learning. Past research indicates training programs have failed to keep pace with the evolving principal's role (Duncan et al., 2011; Fleck, 2008; Hernandez et al., 2012; Lashway, 2003; Lashway, 1999; Levine, 2005; Lynch, 2012; Miller, 2013; Reed & Kinsler, 2010; Zubnyzycki, 2013), and the debate concerning the design of PPPs is expected to continue well beyond this study.

The findings of this study highlighted a discrepancy in the percentages of PPP graduates who completed a full-time internship and entered into the field of educational leadership compared to PPP graduates who completed practicum courses as part of their program of study. Nearly all of the graduates who completed a full-time internship as part of their training moved into school and/or district level leadership positions. The one internship graduate who did not transition into a school or district leadership role moved into a leadership position for Teach for America (TFA), an alternative teacher preparation entity. Conversely, more than half (60%) of the graduates who completed a part-time practicum failed to move into a school or district leadership role within three years of graduation. These findings align with previous research that suggests PPPs that utilize practicum courses could encounter greater wastes in resources when considering educational leadership program missions to prepare leaders who can affect change in schools (Pannell et al., 2015). According to the authors, most PPPs fail to provide meaningful clinical instruction, and surveys revealed that 89% of PPP alumni felt inadequately prepared to deal with the realities of the job. McBrayer, Chance, Pannell, and Wells (2018) defined school leaders' self-efficacy as "self-assessment of one's perceived capability to organize and implement action required to effectively lead organizational change to achieve a performance outcome". The traditional university structure could be contributing to leadership shortages experienced by many rural and urban schools by failing to provide opportunities for meaningful immersion in practice thus perpetuating a lack of leadership self-efficacy amongst their graduates. At the very least, traditional PPPs must focus on *readiness* in their preparation of aspiring administrators and ensure they provide meaningful experiences with ample opportunity for practical immersion. Meaningful

practical experiences, combined with rigorous and relevant coursework, has the potential to increase candidates' school leader's self-efficacy and combat principal shortages in America's underserved communities.

Albritton and Stacks (2016) noted that engaging students in their learning process presents challenges at all levels of education, including higher education settings which are often criticized for not supporting authenticity and relevancy in the learning process. The authors contended when students have the opportunity to connect theory to practice, they reap many of the cognitive benefits of engaged pedagogies including deeper levels of critical thinking, problem solving, reasoning, elaboration strategies, metacognition strategies, and skill transfer. These cognitive abilities are essential for passing the school leadership licensure assessments required by states to obtain principal certification. In this study, principals who completed a year-long, full-time internship scored significantly higher on the state school leadership licensure assessment than principals who completed a part-time practicum, indicating immersion in practice might better prepare educational leadership candidates for their licensure exams.

Further, the findings of this study revealed both, practicum courses and full-time internships, to be effective in preparing school principals to effect positive gains in student achievement. Principals who completed practicum courses experienced more than three times the gains in student achievement in their first year in the principalship than principals who completed a full-time internship; however, internship principals met school-wide growth residuals at a 7.6% higher rate than PPs.

The results of this study suggest the field experience structure may not be as critical for instructional leadership preparedness as the type of activities candidates are engaged in. The attainment of knowledge for initial licensure and the acquisition of skills for application in the field for successful leadership are both critical pieces PPPs must focus on to improve and enhance educational leadership programs. Innovative and effective leadership preparation holds a level of practical significance that needs to be addressed.

Recommendations for Future Research

Research has established a strong connection between school leadership and student achievement in our nation's schools, and because our schools are not performing at expected levels, PPPs have come under fire from critics and policymakers. Although the results of this study indicate multiple field experience structures can effectively prepare aspiring principals, a focus on improvement efforts could result in the production of higher quality school leaders and an even greater impact on student achievement. Recommendations for future research to assist PPPs in preparing effective school leaders include continued evaluation of field-based experience structures and qualitative follow-ups to gain insight into the type of field experience activities graduates found most beneficial in preparing them for the principal's role. Research efforts could build upon this study to identify demographic information of schools contained in the study and gain more insight on the impacts on student achievement of varying field experience structures as well as conducting similar research studies longitudinally over time as the two educational leadership programs continue to produce graduates who are serving as principals. Further, qualitative research could help gain insight into the effectiveness of the many components of existing principal preparation programs by hearing from the voice of the participants about their experiences.

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State Assessment for Principal Licensure: Traditional, Transitional, or Transformative?

A Policy Brief

This manuscript has been peer-reviewed, accepted, and endorsed by the International Council of Professors of Educational Leadership (ICPEL) as a significant contribution to the scholarship and practice of school administration and K-12 education.



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In this policy brief we examine the initial licensure process of all 50 states and the District of Columbia, and classify each licensure process as traditional, transitional, or transformative, based on criteria suggested by a panel of expert practitioners and university faculty from the field of educational leadership. The expert panel recommended general certification requirements like a teaching certificate, teaching experience, a master's degree, field experiences embedded in principal preparation coursework, and a yearlong internship. The panel suggested a number of specific leadership capacities that should be measured by assessment instruments, calling for the measurement higher-level capacities that integrated knowledge, skills, and dispositions. The experts proposed that assessment instruments be related directly to PSEL and NELP standards, and cautioned the instruments should be equitable. The panel advocated the use of multiple assessment instruments and multiple assessment environments, constructed responses, discussion with assessors, and performance-based assessment. Based on the expert panel's recommendations, we created a set of rubrics to classify state principal licensure processes as traditional, transitional, or transformative across a number of indicators. We reviewed documents on the initial principal licensure process for each of the 50 states and the District of Columbia, and using the rubrics, we classified the certification processes of 24 states as traditional and those of 26 states and the District of Columbia as transitional. Our analysis of state licensure processes is followed by our own recommendations for policy and practice leading to a transformative licensure process.

All 50 states and the District of Columbia have adopted principal licensure standards intended “to ensure that candidates have the knowledge and skills to perform tasks necessary for the school to be successful” (Anderson & Reynolds, 2015). The Education Commission of the States reports that at least 37 states require teaching or equivalent experience for an aspiring principal to be licensed, 38 states require field experience, and 37 states require a master’s degree. Additionally, at least 39 states and the District of Columbia have adopted alternative paths toward licensure. A state licensure assessment of knowledge and skills for the principalship, in the form of a written test, portfolio, or both, is required by 33 states. One state requires an assessment on protecting student and civil rights, for two states a written test is one of multiple options for licensure, and fifteen states have no test or portfolio. All but one state’s licensure requirements are aligned with state and/or at least one set of national standards (Scott, 2018).

The licensure exam used by the largest number of states is the School Leaders Licensure Assessment (SLLA), administered by the Educational Testing Service (ETS). The SLLA is used by 14 states and the District of Columbia. The SLLA was revised in 2018 and aligned with the Professional Standards for Educational Leaders (PSEL). The new SLLA includes 120 multiple-choice questions (75%) and 4 constructed-response questions (25%). Six states use the Educational Leadership: Administration and Supervision exam (ELAS), also developed by ETS. The ELAS covers the same content areas as the SLLA, but does not include the constructed response portion. A number of states have unique licensure exams, several developed by ETS or Pearson, and others developed by the state. A few states require the submission of a portfolio in addition to or in lieu of a traditional exam.

A trend in recent years is a two-tiered licensure assessment, with initial assessment and licensure followed by additional requirements and assessment for advanced licensure. The advance licensure may require completion of an induction program and continuing education as well as satisfactory job performance (Vogel & Weiler, 2014). The majority of states have moved from lifetime to renewable certificates, typically to be renewed every five years based on semester hour credits or continuing education units related to school improvement and student learning (Roach, Smith, & Boutin, 2011).

Over the years, both licensure standards and assessments have been critiqued by scholars. Adams and Copland (2005, 2007) were particularly concerned about the incongruence between state goals emphasizing leadership for learning and specific criteria for principal licensure. They wrote, “Licensing today fails to guarantee either entry-level competence or superior leadership. Its mismatch with leadership-for-learning fundamentals flags an incoherence in state policy that diminishes states’ abilities to champion their own learning goals” (p. 182). Fuller and Young (2009) concluded that the results of licensure exams had “little impact on principals retention rates” (p. 3).

Along with their critiques of state licensure requirements scholars have offered suggestions for what those requirements should look like. Anderson and Reynolds (2015) recommend that the assessment consist of or include a portfolio review, and that licensure renewal distinguish provisional from professional licenses, be based on specific benchmarks, and be differentiated by license type. Anderson and Reynolds also recommend that alternative pathways for licensure be provided. Adams and Copland (2005, 2007) recommend that a balance of individual, organization-focused, and learning focused factors be required for licensure. Individual factors include things like character, education, and experience. Examples of organization factors include knowledge of organizations as well as strategic, social, technology, and personnel management

skills. Learning factors include knowledge of and skills for working with programs, students, teachers, schools, communities, and learning.

Goals of this Paper

The goals of this paper are to examine the initial licensure process of all 50 states and the District of Columbia, to classify each licensure process as traditional, transitional, or transformative, and to offer recommendations for future policy and practice regarding the licensure process. By licensure process we mean general licensure requirements, any specific assessment instruments used by the state (including licensure exams and/or portfolios), and the overall assessment process and format.

The Expert Panel

An expert panel that supplemented our review of state assessments for principal licensure by making recommendations for a transformative licensure process was made up of eight members considered by practitioners and university faculty to possess high levels of experience and expertise in educational leadership. The panel consisted of two assistant principals, two principals, two central office administrators charged with developing and supervising school administrators, and two professors of educational leadership with extensive experience as school and central office administrators. All eight panel members hold doctoral degrees in educational leadership. The expert panel completed a survey asking them to identify elements of a transformative licensure process. Our decision-rule for whether a recommendation would be considered a panel recommendation was that six of eight panel members would make that recommendation.

Expert Panel Recommendations for a Transformative Licensure Process

Regarding general licensure requirements, the panel recommended that a teaching certificate and teaching experience be required for principal licensure. One panel member stated, “I am of the belief that, if you supervise teachers, you need to have walked in their shoes.” Another expert commented, “Teacher experience is necessary to bring credibility to the position. Those that do not have significant teaching experience struggle with buy-in from others around instructional issues.” Panel members’ recommendations for how much teaching experience should be required ranged from two to five years.

The panel advocated that a candidate for licensure be required to have a master’s degree, be endorsed by a principal preparation program, and should have engaged in field experiences during their principal preparation program. The panel proposed that field experiences should first be embedded in regular coursework and then be more extensive in a school-based internship. One expert stated, “The main goal of these experiences is for the candidate to make connections between theory and practice, and have opportunities to apply their learning.” Another expert suggested “Field experiences embedded in coursework as a way to connect real-world experiences with academic coursework.” The panel proposed a yearlong internship. An expert explained, “The experience should last an entire school year to give candidates a true sense of starting and completing a school year. Doing so would facilitate continuity and a sustained experience.”

Expert recommendations included capacities that should be measured by assessment instruments. Table 1 provides a list of recommended capacities. The expert committee noted that

merely including such content in an exam or portfolio requirement would be insufficient for a licensure process to be considered transformative. In the words of one panel member,

It is imperative that each item be assessed in such a way that matches the learning that is expected and necessary for the cutting edge, transformative nature of the leadership that is being sought. Problem-based learning needs to be aligned with theory. Laws need to be applied to authentic school scenarios. Self-reflection and ethical behavior need to be cultivated and assessed.

All of the panel members agreed that assessment instruments should measure higher-level capacities that integrate knowledge, skills, and dispositions.

Table 1

Expert Panel's Recommendations for Knowledge, Skills, and Dispositions to be Measured by Assessment Instrument(s)

<ul style="list-style-type: none"> • Supervision/Instructional Leadership • Team Building • Special Education • School-Parent/Community Collaboration • Leadership Theory & Research • Ethics • School Law • School improvement 	<ul style="list-style-type: none"> • Professional Development • Diversity/Social Justice/Cultural Competence • Developing School Mission & Vision • Curriculum Development • Student Assessment • Recruiting, Hiring, and Evaluating Staff • School Culture and Climate • Managing Facilities, Operations & Resources
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The expert panel recommended that licensure assessment instruments be directly related to PSEL and/or NELP national standards, but panel members were more cautious regarding basing the instruments on state standards. One panel member stated,

...whether or not the requirements should be directly aligned to them [state standards] depends on the nature of those standards. Are those standards cutting edge and transformative? This needs to be an ongoing discussion. Alignment that is ever-evolving should be the goal.

The expert panel also advocated that the assessment instruments include measures of leadership capacity from the candidate's principal internship. The panel did not recommend multiple-choice items for written exams. Rather, the panel preferred open-ended written responses to questions based on short cases, scenarios, or videos. Finally, the panel stated that for assessment instruments to be considered transformative they need to be equitable regarding candidates from different cultural groups.

Concerning the overall process and format of licensure assessment, the expert panel believed that there should be multiple ways of assessing candidates, such as written exams, videos of the candidate's leadership performance, portfolios providing evidence of leadership capacities, and direct observation of candidates in authentic situations requiring the demonstration of leadership capacity. One panel member stated, "There should be more than a required test. There should be several types of assessment to check the leadership aptitude of the candidate." The panel also called for the assessment to take place in multiple environments, such as online, at an assessment center, at a university campus, at a PK-12 campus, and in a local community. One panel member noted that a good part of the assessment should occur "in a real-world context." Another panel member described advantages of having part of the assessment at a designated

assessment center: “This would allow there to be some assessment of how the leader handles stress and interacts with others.”

An interesting recommendation by the panel was to make discussion with those charged with conducting the assessment part of the assessment. A panel member commented, “Some individuals don’t excel on multiple choice items, but they excel in personal conversations and explanations of ideas.” The panel proposed that a transformative assessment process would be in large part performance-based. The performances the panel discussed were authentic in that they would occur either in a real-world situation or the simulation of a real-world situation. The panel proposed that performance-based assessment might take the form of artifacts documenting successful leadership activities in schools or communities; in-basket activities; or group simulations involving candidates discussing an issue, solving a problem, or making a decision. A panel member summed up the value of the panels’ proposals for the process and format of licensure assessment:

While this may be a more complex way of assessing, it provides a more in-depth look at the candidate. This would ensure that the candidate was truly qualified and had the characteristics of a school leader as well as the skills and ability to be reflective and react in situations as needed. There is a lot more to school leadership than a timed assessment that happens in one day without any interaction with anyone. By utilizing some of these tools there would be a more in-depth understanding of the [candidate’s] leadership abilities.

Methods

The primary data collection procedures for this review were searching for and mining documents describing the initial licensure process of each of the 50 states and the District of Columbia. A file was created for each state, and relevant documents identified through internet searches were organized into sections for (a) documents that focused on the general state licensure requirements, (b) if the state utilized one or more a high-stakes assessment instruments, documents that focused on those instruments, and (c) documents describing the overall assessment process and format.

To guide data analysis, we constructed three rubrics based on the expert panel’s description of a transformative licensure process in relationship to the review’s purpose. The first rubric concerned general requirements and included eight criteria established by the expert panel (teaching certificate, teaching experience, master’s degree, field experiences embedded in coursework, internship, endorsed by preparation program, criminal background check, renewable certificate). The second rubric focused on criteria for content of assessment instruments (measures critical capacities; related to PSEL; measures higher level capacities that integrate knowledge, skills, and dispositions; measures capacities developed in internship; evidence of efforts to assure equity). The third rubric included criteria for the overall process and format for the assessment in a transformative licensure process (multiple assessment instruments, multiple assessment environments, constructed responses, discussion with assessors, performance-based assessment).

Levels of state performance for each rubric were traditional, transitional, and transformative, with levels assigned based on the extent to which the established criteria were met. For some criteria, measures of classification were quantitative. For example, for the criterion of critical capacities measured by the assessment instrument(s) rubric, a state was considered at a traditional level if its assessment measured 0 to 8 of the critical capacities, a transitional level if the assessment measured 9 to 12 of the critical capacities, and a transformative level if the assessment measured 13 to 16 of the critical capacities. Other measures were more holistic. For

instance, for the criteria of measuring higher-level leadership capacities in the assessment instrument rubric, the measures were “little or no focus on measuring higher-level capacities” (traditional), “some focus on measuring higher-level capacities” (transitional), and “heavy focus on measuring higher-level capacities” (transformative). Only indirect measures could be used for some of the components recommended by the expert panel. For example, the archival data was not sufficient for determining whether each state was employing equitable licensure assessment, and we were limited to searching for evidence that efforts had been made to assure equity.

Data analysis began with a review of individual state files we had developed to become familiar with each state’s licensure process. Next, we analyzed each state’s process in relationship to the three rubrics, using criteria across the rubrics to assign each state’s licensure process to the traditional, transitional, or transformative level. We then created a single matrix with the 50 states and the District of Columbia identified on the horizontal axis and the criteria from the three rubrics (11 criteria in all) listed across the vertical axis. We entered the levels (traditional, transitional, or transformative) we had assigned each criterion for each state in the matrix cells (see Appendix). This matrix allowed for a direct comparison of the results of our analysis across the various states.

Results of the Review

The first part of our results section provides an overview of the traditional, transitional, or transformative nature of the licensure process for the 50 states and the District of Columbia (for reasons of efficiency, we often treat Washington D.C. as a “state” when reporting general results). The second part of this section provides in-depth descriptions of a traditional licensure process recently phased out by Texas as well as Texas’ new licensure process that we have classified as transitional. We have no close-up of a transformative state process to share, because none of the states was classified at that level. However, the recommendations we share later in this paper, taken together, envision a transformative licensure process.

Overview of the States’ Licensure Processes and their Classifications

Of the general licensure requirements recommended by the expert panel (teaching certificate, teaching experience, master’s degree, field experiences embedded in coursework, an internship, endorsement by the principal preparation program, a criminal background check, and a renewable certificate), only four states required seven or eight of these criteria in their licensure standards and thus were classified as transformative in this area. The largest number of states, 34, were classified as transitional for having five or six of the eight criteria. The remaining states all had no more than four of the general requirements.

At the time this article was written, 35 states and the District of Columbia had high-stakes principal licensure assessment instruments (either written exams or portfolios), and 15 states had no instrument of this type. Table 2 provides the names of assessment instruments used by the various states. The only transformative element within the set of panel recommendations for the high-stakes assessment instrument(s) that the majority of the states possessed was the measurement of specific knowledge, skills and dispositions suggested by the panel. Of the 36 states that had high-stakes assessments, 31 assessed 13 to 16 content areas recommended by the panel. This indicates a new emphasis in recent years on assessing knowledge, skills, and dispositions related to areas like instructional leadership, cultural responsiveness, school culture, ethics, developing school mission and vision, and school improvement. Despite frequent reports

in the literature that most or all states now base their principal licensure standards on the PSEL, only 23 states' licensure assessments were classified as having a high relationship to PSEL standards (transformative for this criterion), and 10 additional state assessments were categorized as having a moderate relationship with the PSEL (transitional). Each of the 10 PSELs includes numerous elements, and some of those elements go beyond the 16 areas recommended by the panel, accounting for more state assessments being directly related to the panel's suggested content than to the PSEL.

For the purpose of our review, we defined higher-level capacities as those that require the integration of higher-order knowledge, skills, and dispositions to carry out complex leadership functions. We did not classify any of the state assessments as transformative in the area of measuring higher-level capacities; we categorized 5 as transitional and 46 as traditional. These results were not due to the lack of any tasks in the assessments that were higher level, but rather were based on the degree of emphasis on measuring higher-level capacities. The rubric on assessment content called for a "heavy focus" on measuring higher-level capacities (in terms of both the number and quality of higher-level assessment tasks) for a transformative classification, "some focus" for a transitional ranking, and "little or no focus" for a state assessment to be placed in the traditional category.

We found only one state assessment instrument that had a strong relationship with the aspiring principal's internship (transformative criterion), and twelve additional state assessments with some relationship to the internship (transitional). Of course, aspiring principals can and do use what they learn in their internships to prepare for licensure exams, and in some cases to develop portfolios to submit as part of licensure assessment. However, few states have provisions specifically tying capacities developed during the principal internship to the licensure assessment.

Although an equitable state licensure assessment instrument was one of the panel's criteria for a transformative assessment, investigation to determine if state assessment instruments were equitable was beyond the scope of this study. We did, however, examine archival data to determine the extent to which developers of various licensure assessments had at least made efforts to assure the assessment was equitable. We did not find extensive evidence of efforts to make any of the state assessments equitable regarding various cultural groups. We did find "some evidence" of evidence to assure equity for 36 states. We assigned these states' assessments to the transitional category.

We found low levels of congruence between the expert panels' recommendations for the overall process and format of licensure assessment and the states' processes and formats. The expert panel recommended that multiple assessment instruments be used for the assessment— suggestions included some combination of written tests, videos of the candidate's leadership performance, portfolios providing evidence of leadership capacities, and direct observation of candidates in authentic situations. We classified the use of one assessment instrument as traditional, two as transitional, and three or more as transformative. Regarding multiple instruments, none of the state assessments were classified as transformative, and only three were categorized as transitional. Similarly, the panel's recommendation of multiple assessment environments (some combination of assessment online, at the principal preparation program site, on a PK-12 campus, in the community served by the school, and at a testing center) was not consistent with state practice—no state provided three or more assessment environments, and only two states used two different environments.

Only one state's assessment placed a major emphasis on constructed-responses and thus was classified as transformative for the constructed-response criterion. The majority of states

required some constructed-responses and their assessments were identified as transitional for that criterion. None of the states used discussions with assessors. Although many states use the term “performance-based” in descriptions of their licensure assessment, we found only four state assessments that met our definition of performance-based, which is assessment of leadership activities in real world situations or authentic simulations of real-world situations.

Our overall comparison of the expert panel’s recommendations for components of a transformative principal licensure process with the actual licensure processes across the states indicates that there currently are no states that meet the panel’s recommendations to a high enough degree to classify them as transformative. Our review indicates that 24 state licensure processes are operating at a traditional level and 26 states’ and the District of Columbia’s licensure processes are functioning at a transitional level.

Table 2
States’ Principal Licensure Assessment Instruments

States	Assessment Instrument
AR, DC, KS, LA, ME, MD, MI, MS, NJ, PA, RI, TN, VT, VA	School Leaders Licensure Assessment (SLLA) (by ETS) (also see KY)
AL, CO, NE, SC, UT, WV	Educational Leadership: Administration and Supervision (ELAS) (by ETS)
CT	Connecticut Administrator Test (by ETS) (This test is based on the PSEL standards and covers content similar to ELAS)
AZ	Arizona Education Proficiency Assessment (by Pearson)
CA	California Administrator Performance Assessment (Cal APA) (by Pearson)
FL	Florida Educational Leadership Examination (by Pearson)
GA	<ul style="list-style-type: none"> • Georgia Assessment for the Certification of Educators (GACE) • Educational Leadership (by ETS) • Georgia Ethics for Educational Leadership (by ETS) • Performance Assessment for School Leaders (PASL) (by ETS)
IL	Principal as Instructional Leader (by Pearson)
IN	Indiana Core Assessment: School Administrator—Building Level (by Pearson)
KY	<ul style="list-style-type: none"> • Kentucky Specialty Test of Instructional and Administrative Practices (by ETS) • School Leaders Licensure Assessment (SLLA) (by ETS)
MA	Massachusetts Performance Assessment for Leaders (PAL) (by Pearson)
MO	Missouri Educator Gateway Assessment: Building Level Administrator (by Pearson)
NM	New Mexico Teacher Assessments: Educational Administrator (by Pearson)
NY	New York State Teacher Certification Exam: School Building Leader Assessment (by Pearson)
OH	Educational Leadership Ohio Assessment for Educators (by Pearson)
OK	Oklahoma Subject Area Test: Principal (by Pearson)
OR	Oregon Educator Licensure Assessment: Protecting Student and Civil Rights in the Educational Environment (by Pearson)
TX	<ul style="list-style-type: none"> • TExES 268 Principal as Instructional Leader Exam (by Pearson) • Performance Assessment for School Leaders (PASL) (by ETS)
AK, DE, HI, ID, IA, MN, MT, NV, NH, NC, ND, SD, WA, WI, WY	No Assessment Instrument

Close-up on Texas' Old and New Licensure Processes: From Traditional to Transitional

Texas' general requirements for both the licensure process recently phased out as well as its new licensure process include the following: a candidate must hold a valid classroom teaching certificate, have two years of teaching experience, have received a master's degree and completed an approved principal educator preparation program, complete a practicum/internship during the preparation program, and pass a criminal history background check. Texas offers a renewable certificate for principals. Beyond these general requirements, Texas also requires a passing score on its licensure exams.

The high-stakes licensure exam recently phased out by Texas and the new exam provide good examples of traditional (the old exam) and transitional (the new exam) instruments. The old exam, the TExES 068 principal exam, focused on three domains: School Community Leadership (33%), Instructional Leadership (44%), and Administrative Leadership (23%). The TExES 068 Principal exam consisted of 120 multiple-choice questions, including discrete items, cluster sets, decision sets, and technology-enhanced items. Decision sets were frequently used, providing the test taker with an initial stimulus describing the primary problem plus additional information that would occur later in the scenario throughout a series of five to nine questions. The TExES 068 Principal assessment had a 72% passing rate for 2015-2016 and 73% for 2016-17, with over 4000 test takers each year (Texas Education Agency, 2016; 2017).

The old assessment covered thirteen critical content areas noted by the expert panel as being included in a transformative assessment instrument. The old assessment had a low relationship to the PSEL (traditional), little or no relationship to capacities developed during the internship (traditional), and some evidence of efforts made to assure equity (transitional). Regarding the overall assessment process and format, candidates were assessed on a single exam in a single assessment environment, without the use of constructed responses. No discussion with assessors was part of the assessment. No performance-based assessment was used with candidates. Thus, the outgoing assessment instrument was classified as traditional across all five criteria for administration and format. Based on the criteria recommended by the expert panel, the overall classification of the Texas initial licensure using the TExES 068 exam was traditional.

The new TExES 268 exam consists of six domains: School Culture (23%), Leading Learning (45%), Human Capital (19%), Executive Leadership (6%), Strategic Operations (6%), and Ethics, Equity and Diversity (6%). Scenarios in the test represent various groups, including rural, urban and suburban schools, and early childhood, elementary, middle, and high schools. The exam includes 91 discrete items, cluster sets, technology-enhanced items, and constructed-response questions. Videos are integrated into some of the cluster sets and the constructed-response questions in the new exam. Authentic documents, such as school schedules, school and student data reports, student work samples, and portions of professional development plans are integrated into the cluster sets and constructed-response questions. The four constructed response questions focus mainly on the School Culture and Leading Learning domains. Question 1 focuses on how the principal monitors instruction and provides evidence-based feedback. Question 2 focuses on how the principal develops and implements a rigorous curriculum. Question 3 focuses on how the principal supports staff in using data to inform instruction and interventions. Question 4 focuses on creating a positive, collaborative culture and setting high expectations (Texas Education Agency, 2018). The exam uses a 0-4 scoring rubric to evaluate each constructed response on five different criteria.

The ETS Performance Assessment for School Leaders (PASL) is the second of the new TExES licensure exams. Principal candidates complete three tasks during their internships. Task 1 requires the candidate to address and resolve a problem that influences instructional practice and student learning, and is documented with artifacts, including pages of the plan, the timeline, communication with stakeholders, and student work. Task 2 requires the candidate to establish and support continuous professional development with staff to improve instruction, and is documented with artifacts, including pages from the professional development plan, a completed walk-through observation form, a student work sample, and feedback survey. Task 3 requires the candidate to build a collaborative team within the school to improve instruction, achievement, and the school culture. A video of the candidate facilitating the team is a required artifact of this process.

The new Texas assessment instruments cover thirteen critical content areas noted by the expert panel as being important for an assessment instrument, therefore the instruments were classified as transformative for this criterion. The new instruments have a moderate relationship to the PSEL, have some relationship to capacities developed during the internship, and there was some evidence of efforts made to assure equity, thus the instruments were classified as transitional for these three criteria. Candidates are assessed with two exams in two assessment environments (transitional), and the assessments include the use of some constructed responses (transitional). Discussion with assessors is not part of the assessment (traditional). Extensive performance-based assessment is included (transformative). Based on the panel's criteria, the overall classification of the new Texas principal initial licensure with the TExES 268 exam is transitional.

Discussion

All but one of the eight general criteria that the expert panel suggested as characteristic of a transformative principal licensure process seem commonsensical, and a strong argument can be made for the eighth recommended criterion, field experiences embedded in the principal preparation program's coursework. Yet only four of the states meet at least seven of the panel's eight general criteria. Regarding assessment instruments, the areas where state instruments mirrored experts' conceptions of transformative assessment were in their specific content (knowledge, skills, and dispositions measured) and the relationship of that content to the PSEL. These results are most likely due to the strong influence of the PSEL on states and the general tendency in recent years for both university preparation programs and school districts to place increasing emphasis on areas such as instructional leadership. Broadly defined, instructional leadership encompasses many of the panels' suggestions as well as the national standards, including the development of capacities in instructional supervision, professional development, curriculum development, and student assessment. Other areas emphasized in recent years by the PSEL, universities, and school districts, and which are reflected in many state-assessment instruments, include cultural responsiveness, school culture and climate, ethics, school vision and mission, recruitment, hiring and evaluation of staff, and school improvement.

Higher level capacities—those that require integration of knowledge, skills, and dispositions in order to identify and address critical goals and problems—are essential to the modern principal, yet none of the state assessment instruments are at the transformative level for this criterion, and only five were classified as transitional. Our data was inadequate to determine whether state assessment instruments are equitable, and there was insufficient evidence to classify

any of the states as transformative even in their *efforts* to assure equity. This should be an area of concern for those interested in preventing test bias and promoting social justice.

With respect to the assessment process and format, very few states make use of multiple instruments, multiple environments, or truly performance-based assessment, and no states provide for discussion between candidates and an assessment team. These results are no doubt due in part to the expense of such components. The logic of the expert panel members for including these ingredients in the assessment is powerful. Some types of knowledge, skills, and dispositions are best measured in different environments (online, schools, communities, the university campus, a testing center) and through different instruments (tests, videos, portfolios, direct observation). And some capacities can only be fully assessed through personal interaction between the participant and the assessors. Along with these considerations, we must recognize the reality that different candidates have different communication styles and cultural assets, and a single environment or instrument could be biased in favor of some candidates and against others. Performance-based assessment is widely acclaimed by many state agencies, principal preparation programs, and school districts as the preferred way of measuring the capacities of aspiring principals, but for the most part there is a considerable gap between rhetoric and reality in this area. The one criterion on the assessment process and format rubric for which a good number of states were classified as transitional was the one on constructed response items. For these states the constructed response items were mixed with other types of items.

The overall results indicate that, when compared to the expert panel's criterion, the state principal licensure assessments are fairly evenly split between transitional and traditional assessment processes, with no transformative models in place. Whether we feel good, bad, or indifferent about these results depends to some extent on whether we agree with the expert panel's criteria. It also depends on what we believe the purpose of the initial licensure assessment should be: should it be to determine whether the new principal or assistant principal has minimal entry skills, with higher level capacities to be developed through experience; or should it be to assess—and promote—higher-level capacities for new school leaders? The scholars are split on this issue. However, given the research that tells us the principal is a critical factor in teacher performance and student learning (Leithwood, Seashore-Louis, Anderson & Wahlstrom, 2004; Marzano, Waters, & McNutty, 2005; Orphanos & Orr, 2014; Orr, 2006), it makes sense to us for the field to make every effort, through principal preparation and initial licensure assessment, to place high-capacity leaders in the principal's role, then follow-up with high-quality induction, continuing professional development, and license renewal requirements that foster continuous capacity building to meet the ever changing needs of our schools, teachers, and students.

Recommendations for Policy and Practice

Although we have no state models of a fully transformative principal licensure process to share, based on the expert panel's suggestions and transformative components of some state processes, we make the following recommendations for developing a transformative licensure process.

Increase State Agency-University-School District Partnership

All states tend to promote their licensure processes by stating that principal preparation programs and school districts were consulted during the development of the process, but we have doubts about how widespread, and how authentic, such partnerships have been in many states. Although

a particular state agency has the legal responsibility for licensure requirements, there is no reason a state cannot seek and seriously consider input from universities and school districts at each stage of the development process, including the establishment of general requirements, the content of assessment instruments, and the overall assessment process and format. Principal preparation programs and school districts can be partners not only in preparing aspiring principals to meet licensure requirements, but also in the actual assessment process and follow-up.

Include Multiple General Requirements

In the main, we agree with all of the general criteria for a transformative licensure process recommended by the expert panel: a teaching certificate, teaching experience, master's degree, field experiences embedded in course work, an internship, endorsement by the principal preparation program, a criminal background check, and a renewable certificate. Regarding the field experiences embedded in course work, it is imperative that these be developed collaboratively with the principal preparation program (which will require and supervise the field experiences), and school districts (where most of the field experiences will take place). Also, it makes sense that the principal preparation program decides whether particular field experiences take place in regular coursework, the internship, or both. The power of a quality internship and the variety of experiences that should take place in an internship suggests to us that the internship should be a year in length. The topic of general requirements raises the issue of alternative licensure, which we noted earlier is an option in 39 states and the District of Columbia. The routes to alternative licensure currently vary widely from state to state. Alternative licensure could certainly be an option in a transformative process—the key here would be whether the alternative process provided evidence that the aspiring principal possessed the same personal qualities and professional capacities as candidates certified by the regular process.

Incorporate Specific Content Areas in Assessment Instruments

We agree with the expert panel that an exam should be part of the principal licensure process. We also agree with the panel's 16 recommended content areas for the assessment instruments, but we would add some additional content, such as measurements of leadership development during the aspiring principal's teaching career, growth during the candidate's graduate studies, and the capacity to engage in and facilitate reflective inquiry. An important aspect of instrument content is the relative emphasis placed on different types of content through the number and depth of assessment tasks. For example, we would place considerable emphasis on school culture, content concerning instructional leadership and affiliated areas, special education, school-family and school-community collaboration, ethics, school improvement, cultural competence, school mission and vision, curriculum development, and recruiting and hiring. We also agree with the panel that the content should be directly related to the PSEL, but the degree of emphasis on different standards and elements within those standards is critical.

Employ Constructed-Response Items

Constructed-response items are items that require test takers to create their own answer to a question rather than to choose from a set of possible responses provided to them. Typically, the constructed response is a short answer or essay. Popham (2003) compares constructed-response

items to selected-response items: “Clearly, creating a response represents a more complicated and difficult task” and the test taker “really needs to understand something in order to construct a response based on that understanding” (p. 86). The expert panel clearly preferred constructed response items to multiple choice items on principal licensure exams. We agree with the panel that constructed-response items can be important ingredients in a broader, transformative licensure assessment process.

Emphasize Higher-Level Capacities

Assessing higher-level capacities goes beyond the basic content areas covered by the assessment instrument; in reference to the definition we proposed earlier, it involves measuring the aspiring principal’s ability to integrate higher-order knowledge, skills, and dispositions to carry out complex leadership functions. The design process here is to (a) identify critical, complex leadership functions, (b) identify the higher order knowledge, skills, and dispositions that, considered together, are needed to accomplish those functions, and (c) design measures that will indicate whether the candidate has developed the requisite capacities and that can be incorporated within one or more assessment instruments. This is a complex undertaking, and no doubt calls for the aforementioned collaboration of state agencies, principal preparation programs, and school districts.

Focus on Performance-Based Assessment

There clearly are relationships between performance-based assessment and assessment instruments that measure higher-level capacities, but performance-based assessment has a number of specific characteristics: it requires the application of knowledge and skills to a complex, real-world task or simulation of such a task, and also requires evidence that the individual being assessed can transfer the required knowledge and skills to other real-world situations. Criteria for assessing the individual’s product or performance include content (knowledge and skills displayed), process (methods used to complete the assigned task), quality of the product or performance, and impact of the product or performance in relationship to its purpose (McTighe, 2015).

Utilize Multiple Assessment Instruments and Environments

Although it probably would not be feasible to use all of the various assessment instruments and environments suggested by expert panel members, given the different types of capacities to be measured and the different styles and assets brought to the assessment by aspiring principals, a transformative assessment process would use multiple instruments and environments based on the various capacities the particular state’s assessment process was intended to measure. One can fairly easily envision different capacities that are best measured by review of a video of an aspiring principal carrying out a leadership activity, one or more artifacts submitted as part of a portfolio, and results of a written test. The same argument holds true for multiple assessment environments. In some cases a PK-12 school is the best place to assess a candidate assisting teachers, and a community environment may be the best place to appraise an aspiring principal’s work with parents and community members.

Build Discussion with Assessors into the Assessment Process

A two-way discussion between aspiring principals and those charged with assessing the candidate is related to several of the other criteria for a transformative assessment process, but we treat it separately here because it is both an unused and a powerful assessment format. Discussion allows assessors to engage directly with aspiring principals, to ask follow-up questions, and to observe candidates' spontaneous responses. Assessors might hold discussions with an individual aspiring principal or a group of candidates. If the discussion is with a group of aspiring principals, it can be structured to allow interaction among candidates as well as between candidates and assessors. Such discussions, whether with individuals or groups, would need to strike a balance between some level of standardization (e.g., common guidelines, topics, and assessment rubric for all discussions) and sufficient flexibility to allow assessors to probe the aspiring principal's knowledge, skills, and dispositions. The protocol for discussion could be developed collaboratively by state officials, representatives of principal preparation programs, and school-district practitioners, and the assessment teams could include trained representatives from each of these stakeholder groups.

Ensure Equity

Although we were unable to measure the degree of equity provided by the assessment instruments used across the nation, there is no question that assessment instruments in a transformative licensure process would be equitable. Documentation of surface efforts to assure equity is not sufficient. The only way to assure equity is to pilot assessment instruments across different and sufficiently represented cultural groups, compare the results across those groups, revise the instruments, and continue this cycle until all cultural bias has been eliminated. This can be an expensive and time-consuming process, but if states are going to use high-stakes assessments such assessments need to be equitable. Here it may be necessary for state agencies to call on outside experts to review processes used by corporate test makers to assure equity or to assist with state development of assessment instruments for the same purpose.

Provide Educative Feedback

A transformative principal licensure process will no doubt prevent some individuals—those without the necessary leadership capacities or the potential to develop those capacities—from becoming school administrators; however, aspiring principals who do not succeed in their first attempt to navigate the assessment should be provided additional opportunities to do so. Feedback to those individuals should go beyond simply informing them of their overall score or scores on particular sections of an assessment instrument, but should include specific information on improvements they need to make in their knowledge and skills and identify resources that can help them prepare for another effort. Specific feedback on assessment results also should be shared with those who pass the assessment and become school leaders. It's unlikely that any given candidate will perform perfectly on a state assessment, and detailed feedback can assist new principals to further develop their leadership capacity through tailored induction, mentoring, and continuing education programs. Assessment feedback should be:

- Specific to an intended outcome
- Explicit in comparing the aspiring principals expected and actual performance in

relation to the intended outcome

- Constructive in explaining how the candidate can improve their performance in order to meet the intended outcome
- Promotive of reflection and metacognition (Hooper, 2010).

Additionally, principal preparation programs can benefit from group data on assessment results for their students. These programs can use such data to adjust their curriculum, instruction, student assessment, and field experiences to address areas of need revealed by assessment data. Preparation programs that offer early-career assistance to their graduates in new positions in school administration can use assessment data to help the graduates successfully transition to school leadership and begin the journey toward license renewal.

Feedback on assessment results needs to be a two-way street. Group results might indicate problems with the assessment content, instruments, process, format, or analysis that preparation programs and school districts can make the coordinating state agency aware of. University faculties have experts both in educational leadership and assessment who can serve as valuable consultants to the state on piloting and revising assessments, as well as utilizing assessment results.

Closing Comments

The principal licensure process, in our view, should be part of a continuum of growth and development of school leaders. This continuum includes principal preparation, licensure, induction, and repeated cycles of continuing professional development and license renewal. The purpose of all of the elements on the continuum should be to develop transformative leaders who have the commitment and capacity to transform our schools. Principal licensure now is being emphasized by most states strictly as an accountability measure. The potential of the licensure process as part of a continuum of transformative growth and development is not being realized. In the words of Adams and Copland (2007), “While states may anchor leadership development in licensing, the emergence of real capacity requires additional investments and a conscious, purposeful plan” (p. 158). Each state needs to join with principal preparation programs and school districts to develop a comprehensive plan for developing transformative school leaders, and principal licensure needs to become an educative and congruent part of that plan.

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Appendix Comparison of State Principal Licensure Assessment Processes

☛=Transformative ☞=Transitional ○=Traditional												
State	General Requirements	Content of Assessment Instruments					Assessment Process and Format					Overall
		Specific Content	Related to PSEL	Higher Level Capacities	Measures Capacities Developed in Internship	Efforts to Assure Equity	Multiple Tools	Multiple Environments	Constructed Response Items	Discussion with Assessors	Performance Based	
AL	☞	☛	☛	○	○	☞	○	○	○	○	○	○
AK	☞	○	○	○	○	○	○	○	○	○	○	○
AZ	☞	☛	☞	○	○	☞	○	○	○	○	○	☞
AR	○	☛	☛	○	○	☞	○	○	○	○	○	☞
CA	☞	☛	☞	☞	☛	☞	○	○	○	○	☛	☞
CO	○	☛	☛	○	○	☞	○	○	○	○	○	○
CT	☞	☛	☛	○	○	☞	○	○	○	○	○	○
DC	☞	☛	☛	○	○	☞	○	○	○	○	○	☞
DE	☞	○	○	○	○	○	○	○	○	○	○	○
FL	○	☞	○	○	○	☞	○	○	○	○	○	☞
GA	☞	☛	☛	☞	☞	☞	○	○	○	○	☛	☞
HI	☞	○	○	○	○	○	○	○	○	○	○	○
ID	☞	○	○	○	○	○	○	○	○	○	○	○
IL	☞	☛	☞	○	○	☞	○	○	○	○	○	☞
IN	○	☞	☞	○	○	☞	○	○	○	○	○	☞
IA	☞	○	○	○	○	○	○	○	○	○	○	○
KS	☛	☛	☛	○	○	☞	○	○	○	○	○	☞
KY	☞	☛	○	☞	○	☞	○	○	○	○	○	☞
LA	☞	☛	☛	○	○	☞	○	○	○	○	○	☞
ME	☞	☛	☛	○	○	☞	○	○	○	○	○	☞
MD	☛	☛	☛	○	○	☞	○	○	○	○	○	☞
MA	○	○	☞	☞	☞	☞	○	○	○	○	☛	☞
MI	☞	☛	☛	○	○	☞	○	○	○	○	○	☞
MN	☛	○	○	○	○	○	○	○	○	○	○	○
MS	☞	☛	☛	○	○	☞	○	○	○	○	○	☞
MO	○	☛	☞	○	○	☞	○	○	○	○	○	☞
MT	☞	○	○	○	○	○	○	○	○	○	○	○
NE	☞	☛	☛	○	○	☞	○	○	○	○	○	○
NV	☞	○	○	○	○	○	○	○	○	○	○	○
NH	○	○	○	○	○	○	○	○	○	○	○	○
NJ	☞	☛	☛	○	○	☞	○	○	○	○	○	☞
NM	☞	☛	☞	○	○	☞	○	○	○	○	○	○
NY	☞	☞	☞	○	○	☞	○	○	☛	○	○	☞
NC	☞	○	○	○	○	○	○	○	○	○	○	○
ND	○	○	○	○	○	○	○	○	○	○	○	○
OH	☞	☛	☛	○	○	☞	○	○	○	○	○	☞
OK	○	☛	☞	○	○	☞	○	○	○	○	○	☞

Computer Science Courses as a Graduation Requirement at the State and National Level: A Policy Brief

This manuscript has been peer-reviewed, accepted, and endorsed by the International Council of Professors of Educational Leadership (ICPEL) as a significant contribution to the scholarship and practice of school administration and K-12 education.



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Computer science education has seen a large national push to be included in the K-12 curriculum (Fluck, Webb, Cox, Angeli, Malyn-Smith, Voogt, & Zagami, 2016; Theresa Avancena & Nishihara, 2014; Veletsianos, Beth, Lin, & Russell, 2016; Yadav, Gretter, Hambrusch, & Sands, 2016). Students are leaving schools and entering an economy driven by technology and by a need to understand how to use and develop that technology (Armoni & Gal-Ezer, 2014; Bozick, Srinivasan, & Gottfried, 2017; Burke, 2016; Stuikeys, Burbaite, Blazauskas, Barisas, & Binkis, 2017). As the State of South Dakota begins the process of reexamining their graduation requirements, the State Department of Education should consider the importance of computer science education in the curriculum as a standalone graduation requirement.

Three aspects of computer science call for its inclusion in the curriculum. These three aspects include introducing computer science at elementary or middle school grade levels, ensuring the computer science courses contain skills that can be transferred to other subjects, and providing the necessary skills to meet the changing demands of today's society. Including computer science in the curriculum will force high schools in South Dakota to examine their curriculum to identify where changes can be made to make room for the necessary computer science course or courses. The inclusion of computer science in the South Dakota graduation requirements would also force the State Department of Education to create professional development opportunities, possibly with the help of higher education or local technology companies, for teachers to develop better pedagogical strategies. The policy brief that follows outlines the argument, expands on the important aspects, and describes the implications of the inclusion of computer science as a standalone requirement in the South Dakota high school graduation requirements.

High school graduation requirements have largely remained unchanged since the time of their original inceptions (Silva, White, & Toch, 2015, p. 8). Students in high schools have been required to take multiple classes in the areas of mathematics, science, social studies, and English with various other half or full credit requirements in elective areas. The original and current intent was to provide high school students with the necessary skills and knowledge to be successful in postsecondary colleges and universities. The graduation requirements currently in place have failed to address the rising influence of technology on modern high school students. As technology has become a more prevalent part of the daily lives of students both in and out of classrooms, schools have been slow to adopt programs that help students understand how to use that technology.

With the rise of technology and computer-based jobs, schools need to a hard look at how they are preparing students to obtain the necessary skills needed to train students to enter these fields. Technology in schools has often been limited to providing students with desktop computers or laptops that they can use to help complete schoolwork. The classes designed to teach the application or understanding of how technology works are virtually non-existent (Fluck, et al., 2016, pp. 39-40). Students in some school districts may have elective computer science classes available to them but are often limited to a single technological subject or skill. Schools will point to a variety of reasons for not adding more computer science classes to their curriculum with the lack of a state requirement being a part of that reason.

States have attempted to add computer science requirements to the high school graduation requirements, but often include them in the Career and Technical Education (CTE) requirement (Nager & Atkinson, 2016). The problem with including computer science courses in the CTE requirement is that they are often paired as an *or* with a world language or other CTE program. In these cases, a student can meet graduation requirements by taking a foreign language credit or credits in other CTE programs and never have to take a computer science course. As school districts and the South Dakota Department of Education begin to review graduation requirements, computer science programs need to be considered as a standalone requirement to meet the rising demand for skills in those areas.

Approach and Results

There are three aspects within the teaching of computer science to justify the inclusion of a computer science requirement in the South Dakota graduation requirements.

Aspect 1. Computer science can be introduced early on in school and built upon.

Traditional K-12 education has been built on the premise of an introduction of a specific topic or subject and the subsequent expansion of that knowledge in the following years. Through online coding and programming programs such as code.org, Alice, and Scratch, schools can implement computer science skills at an early age in school. According to Theresa Avancena and Nishihara (2014), "Success in advanced computing courses is still often associated with success in introductory programs" (p. 139). With a school-wide initiative to identify and implement coding or programming lessons and units into the regular curriculum, students can be exposed to the necessary fundamental skills that will allow them to become successful in future high school computers science courses. Much like reading and math skills at the elementary level, computer

science skills can be worked on and developed alongside the more traditional topics. Also, as with math and reading skills, computer science skills will not come naturally or quickly to everyone and encourage students to work through the problems to become successful. According to Fluck et al. (2016), “Naturally, in the learning process, some early efforts result in less than complete success – or failure. Handled well with the classroom, this can be an opportunity to build resilience” (pp. 42-43). Resilience in learning is necessary for any student to become successful in their educational goals and with the right approach to computer science programs, students can learn to evaluate where the program is going wrong and how to correct that issue (Aburn, Gott, & Hoare, 2016).

Aspect 2. Computer science contains skills that can be transferred to other subjects.

Computer science courses can teach or reinforce many of the necessary skills that students learn in other areas of their education (Nager & Atkinson, 2016). In mathematics courses such as algebra and geometry, students are required to follow particular rules, to apply different strategies, and to complete problems in sequential order. Science courses apply the scientific method for discovery which includes the observation, hypothesizing, testing, and analyzing of data in order to come up with a working conclusion on a specific problem. English courses often ask students to review pieces of literature and specify the thought the author may have had during the writing of the piece. The ability of students to narrow their focus, to think, and to communicate precisely are necessary skills to be successful in computer science courses. For example, Fluck et al. (2016) declare, “Coding is about thinking. Putting process into a particular code requires precision. Therefore a child skilled at coding, may be transference, be more precise in their thought and have greater capacity to communicate” (p. 42). Burke (2016) also insists, “Programming is increasingly being recognized as not just as economic skill set but a potential pathway by which to get youth more engaged in the workings of the web-based media that surround them” (p. 211). When we can provide students with the ability to effectively communicate their thoughts and ideas, explore and interact with the world around them, we have given them the tools necessary to be successful once they have graduated from high school.

Aspect 3. Computer science can provide the necessary skills to meet the changing technology demands of modern society.

Ernst and Clark (2012) state, "Computer science literacy has become an important aspect to learning and living in an information age" (p. 40). It is difficult to argue that technology is not intruding on all aspects of our daily lives. We are using and relying on technology at an ever-increasing rate, and it is necessary for users to understand how technology can be used effectively and safely. Due to this intrusion and constant flow of information through these devices, students need to build an understanding of how to properly verify information and determine which is reliable and which is not. Fluck et al. (2016) assert, “Technology can change our sense of ethical behavior. Rather than being oppressed by innovation shock, a society equipped with its own creative proponent of new ideas is more likely to sift them and control their impact” (p. 41). Computer science programs can be geared to help middle and high school students understand how to determine which information is accurate and how that information can be used to form opinions on topics and hot button issues that seem to pop up in the news and social media. Through

proper education, we can help students become producers and active creators rather than just passive consumer of technology (Webb, Davis, Bell, Katz, Reynolds, Chambers, & Sylo, 2017).

Conclusions

Conclusions can be drawn at the state level and the national level.

Computer Science Throughout South Dakota

Since computer science courses fall under the Career and Technical Education (CTE) umbrella in South Dakota, many high school students across the state are taking non-computer science courses to meet the requirement for graduation. By taking computer science out of the CTE requirement and making it a stand-alone requirement, schools can provide the students the opportunity to explore the world of computer science and opportunities it affords them in the future. The addition of a computer science credit, whether a half or full, to the South Dakota high school graduation standards has long reaching positive implications for both students and the local and state economies in which these students live.

Computer Science Throughout the United States

Throughout the United States, the correlation between mathematics, science, and computer science allows cross-curricular connections to be made in which students can begin to integrate problem-solving and the scientific method to address real-world problems (Bozick, Srinivasan, & Gottfried, 2017). Being able to think in abstraction, logically, and algorithmically about various bits of information as well as analyze, evaluate, and apply that information to a problem are all necessary for success in computer science as well as many other areas of the high school curriculum (Fluck et al., 2016). The inclusion of computer science in the required curriculum throughout the United States can begin to breakdown the silos; that tend to exist between subjects matters in modern high schools and help students think about the bigger picture of their education in general.

For the local economies throughout the United States, businesses can hire students coming out of school with a more advanced computer and problem-solving skills (Bozick, Srinivasan, & Gottfried, 2017). Unfortunately, as school districts try to add more elective computer science courses into their curriculum, the number of students taking a course in computer science has seen a drop in recent years. Ryoo, Margolis, Lee, Sandoval, and Goode (2013) report, “In fact, fewer students than ever are studying computer science in our high schools despite the increasing demand for computer scientists whose employment is projected to grow faster than any other occupation in America between 2008 and 2018” (p. 162). To further the point of job opportunities for students, Lockard and Wolf (2012) point out that the “US employment in computer science occupations is projected to grow by 22% between 2010 and 2020, with a growth rate of 32% for system software developers” (p. 102). These employment growth numbers are very encouraging for schools throughout the United States as they look for ways to encourage students to enroll in the computer sciences.

Implications and Recommendations

The addition of computer science as a standalone graduation requirement will require schools to do two things that will be necessary for the successful implementation of a computer science curriculum. For students to benefit from computer science as outlined throughout this policy brief, schools have to examine their high school curriculum and provide teachers with practical and meaningful professional development.

Schools Must Examine the Curriculum

Schools will have to make room for the new computer science requirement in an already packed school day. If a computer science course does not already exist, schools will have to examine where a course can be implemented. Administrators will need to identify what grade level they would be required to take the course as well as if courses will be offered beyond the required credit. Also, schools that do not have a current computer science course, the addition of the necessary course may cause other elective classes to be dropped altogether. If a current computer science course is offered, the changing of the class from an elective to a requirement may force additional sections to be offered as well as the reshuffling of staff to pick up the classes lost by the computer science instructor. Depending on the level of technology available to schools for a computer science course, a financial investment may be necessary to get the needed equipment to implement different aspects of a computer science course. With the tightening of budgets in schools across the United States, some schools may feel this investment may be too costly to make the necessary upgrades to provide the best possible opportunity. Schools in this situation, instead of looking at this as a burden, should look at it as an opportunity to collaborate with local businesses or organizations. In fact, the U.S. National Science Foundation (NSF) has funding available for school to help with computer science education programs. Through the involvement of the NSF, other computing companies and experts have become involved in computer science education (Veletsianos et al., 2016).

Schools Must Provide Computer Science Professional Development Opportunities for Computer Science Teachers

More importantly than the necessary class changes and technology needs, schools will need a teacher with the ability to properly teach computer science concepts and applications (Hubwieser et al., 2015). Often times, computer science teachers come from other curricular backgrounds and lack the necessary pedagogical skills or computer science knowledge to provide effective instruction (Yadav et al., 2016). Teacher training and certification through professional development is a vital need for a successful implementation and to keep up with new advances in the computer science field (Opfer & Pedder, 2011). Providing computer science teachers with the ability to attend various trainings, in-services, and summer workshops, computer science teachers can expand on what they know and how they can provide students with practical and engaging classroom opportunities. To help with this professional development, computer and technology companies have begun to provide software courses for computer science teachers. As Menekse (2015) points out, “Google recently funded four institutions to develop computer science teacher professional development workshops in the form of massive open online course” (p. 326). As more technology companies begin to work with schools to help develop computer science software, full

programs, and possibly internships, the computer science experience will become more effective in providing the benefits mentioned earlier in the brief.

When computer science is added as a standalone graduation requirement, teacher preparation programs at colleges and universities will have to adjust to meet the rising demand of computer science teachers. Due to the ever-changing nature of the computer science and technology fields, higher education needs to provide potential computer science teachers with the necessary tools and strategies to understand how to keep up with the current trends and how they can turn those into useful classroom experiences. Universities are in better positions than school districts to work with and form agreements with technology and computing companies. These agreements could help further the understanding of computer science technologies, programs, and applications of future computer science teachers.

Implications for Educational Policy and Practice

The inclusion of computer science as a high school graduation requirement has implications for educational policy and practice. Any change to the educational policy at the state or national level would require changes for K-12 school leaders, higher education officials, and lawmakers responsible for educational funding. K-12 school leaders would be responsible for working with their state's department of education to develop research-based standards and benchmarks. School leaders must also revise their school schedules to provide an opportunity for computer science education at age-appropriate levels. Higher education officials would need to develop programs, courses, and licensure pathways for teachers of computer science. Higher education must also prepare school leaders for a new focus on computer science. Lawmakers responsible for funding would need to allocate the necessary funds at the K-20 educational levels. These stakeholders all play important roles and must work together to create educational policies which prepare students to use computer science to develop technologies for the future.

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How Can Leadership Be Taught? Implications for Leadership Educators

This manuscript has been peer-reviewed, accepted, and endorsed by the International Council of Professors of Educational Leadership (ICPEL) as a significant contribution to the scholarship and practice of school administration and K-12 education.



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Whether leadership can be taught is a decades-long debate. The purpose of this descriptive quantitative research study was to better understand how leadership is taught and learned. One-hundred-and-thirty-two K-12, college, or university faculty, staff, or administrators responded to a survey questionnaire on leadership. The majority (74.54%) of participants who were leaders reported that they felt prepared for leadership positions. The majority (86.36%) of participants reported that leadership can be taught, with only 3.79% indicating that leadership is not a teachable skill. Abilities to create positive work environments, communicate to constituent groups, lead change, and supervise personnel were the top-ranked leadership competencies. Dealing with personnel matters; navigating institutional, local, and state politics; and managing complex budgets were listed as the top challenges leaders face. Participants reported that leadership can be learned through formal education, mentorship, and leadership experience. Participants emphasized the importance of human relations and communication skills for leaders.

Keywords: leadership education; mentorship; leadership learning theories; leadership competencies; leadership challenges

Some discuss leadership ability as an innate characteristic (De Neve et al., 2013; McCauley & Velsor, 2004; McMenemy, 2008; Zhihong, Wei, & Xiaoying, 2013). Others contend that leadership can be learned through a combination of professional development, experience, and mentoring (Antonacopoulou & Bento, 2003; Buchanan, 2017; Elmuti, 2004; Guthrie & Jones, 2012). This researcher argues that leadership can be taught and that learning and being taught leadership are not completely synonymous. Being “taught” leadership implies that there is a teacher involved in the instruction of an individual or group of individuals while learning leadership may occur with or without an intentional teacher such as through self-directed research or through work, leadership, or other experiences.

Statement of the Problem

Educational leaders and others have described a crisis in leadership because of the demand for effective leaders and the need for preparation and professional development of those entering leadership positions in the coming decades (Appadurai, 2009; Zepeda & Ponticell, 2019). While leadership is much discussed, few researchers have sought to better understand how leadership is taught and learned, what leaders need to know, what challenges leaders face, and how leadership professional development influences leadership practices. This researcher sought to address these gaps in the literature through survey research.

Purpose of the Study

The purpose of this descriptive quantitative study was to better understand K-12, college, and university faculty, staff, and administrators’ perceptions of how leadership is taught and learned in order to develop implications for educational leadership educators and programs. The goals of this descriptive quantitative research study were (1) to better understand how leadership is taught and learned, (2) which leadership competencies are most important, (3) what significant challenges leaders face, (4) how leadership education manifests itself in leadership practice, and (5) what leaders need to know and be able to do.

Research Questions

The following questions guided this descriptive quantitative research study: (a) What do K-12, college, university faculty, staff, and administrators perceive as essential abilities and knowledge for educational/organizational leaders? (b) To what extent do participants report that leadership can be taught? (c) What are participants’ perceptions of leadership learning and teaching? (d) What major leadership challenges do participants perceive? (e) How does leadership education manifest itself in leadership practices? (f) What professional development types and topics do participants report as needed for effective leadership training?

Significance of the Study

This topic is relevant to many fields such as business and education because of the demand for qualified and effective educational leaders in the coming decades (Elmuti, 2004; Elmuti, Minnis, & Abebe, 2005; McMahone, 2012; Young et al., 2018). The critical goal of better preparing educational leaders is to serve effectively students, faculty, staff, and the public. This study’s

findings have implications for educational leadership and leadership programs as well as for aspiring and current leaders. The researcher makes recommendations for leadership educators to enhance leadership professional development based on survey feedback and theoretical conceptualizations of leadership learning.

Limitations and Delimitations

This study's participants were limited to those working as faculty, staff, and administrators in K-12, college, and university organizational settings. The researcher sought a purposeful sample, and results may not be generalizable to all populations. Many administrators participated in this survey, which also influenced this study's findings as administrators may have unique perspectives that may or may not be similar to subordinates' views of leadership and the teaching and learning of leadership. Nevertheless, this study's findings offer applicable insights for leaders, leadership educators, and educational leadership program administrators.

Review of the Literature

Can Leadership Be Taught?

There is sparse scholarly literature on the topic of the effectiveness of teaching leadership (Elmuti et al., 2005; Keating, Rosch, & Burgoon, 2014; Rosenbach, 2003; Rymsha, 2013; Zimmerman-Oster & Burkhardt, 1999). Some researchers even suggest genetic factors related to leadership skills and roles, unrelated to being "taught" leadership (Arvey, Zhang, & Avolio, 2007). While research in this area is scant, editorializing on this topic is not (Allio, 2005; Daloz Parks, 2005; DeRue, Sitkin, & Podolny, 2011; Frohman & Howard, 2008; Howard, 1992; Ryan, 2016; Vecchio, 2004). Gunn (2000) wrote, "Can leadership be taught? Most people would answer this with a firm 'No!' But they might have a hard time explaining why this negative response seems to come so naturally" (p. 15). Many people, including leadership educators and leaders, have feelings about what good leadership is, how to teach people leadership skills, and how leadership is learned. Doh (2003) reported on interviews he conducted with leadership educators, asking them the question, can leadership be taught? Participants reflected little diversity demographically or in thought. Doh interviewed no women educators, and he may have drawn richer conclusions by consulting women and men actually in leadership positions rather than those whose aim was already to teach leadership. Rymsha (2013) used Kouzes and Posner's (2003) framework for effective leadership, without an analysis or evaluation of the appropriateness of the framework, to structure her analysis of a corporate leadership program. Kouzes and Posner's leadership framework is outlined in their popular leadership text *The Leadership Challenge* and is based on the authors' collection of case studies. Keating et al. (2014) sought to measure leadership capacity in students by using pre- and post-tests for a leadership theory course. Reporting that students learned leadership with significant findings, the researchers grouped students in high-, median-, and low-scoring groups to measure differences in pre- and post-test scores rather than reporting on and analyzing the significance of the differences in the total sample's scores. Zimmerman-Oster and Burkhardt (1999) found that the leadership programs they studied produced significant results with participants reporting "increased self-understanding, ability to set goals, sense of ethics, willingness to take risks, civic responsibility, multicultural awareness, community orientation, and a variety of leadership skills"

(p. 62). How these skills were reflected in these participants' work/lives was not mentioned or studied. Hackman and Wageman (2007) suggested a need for the type of research presented here: For all of the research that has been conducted on the topic of leadership, the field remains curiously uninformed. ... Yet, there are no generally accepted definitions of what leadership is, no dominant paradigms for studying it, and little agreement about the best strategies for developing it and exercising it. (p. 43)

The present study sought to address these gaps in the literature through its discussions of findings on leadership teaching, learning, knowledge, and abilities.

Theoretical Framework: Leadership Development

The theoretical grounding for this research is underpinned by theories of epistemological development through formal and informal learning experiences. The results from this study and others suggest that leadership comes from innate personality characteristics and developed skills (Connaughton, Lawrence, & Rubin, 2003; Elmuti et al., 2005; Rosenbach, 2003). Zhihong et al. (2013) suggested that some leadership skills and traits may not be teachable: "some tacit dimensions of leadership involve different processes to gain commitment to a strategy and vision, or the ability of empowering employees by building relationships and demonstrating confidence with humility that can never be effectively addressed by formal classroom training" (p. 25). Other researchers suggested that leadership education programs have limitations. According to Elmuti et al. (2005), "The current leadership curriculum focuses more on theoretical and conceptual training ... instead of [a] comprehensive and integrated approach" (p. 1022). Elmuti et al. (2005) suggested that leadership development programs need more holistic approaches, focusing on analysis, ethics development, multi-disciplinary methods, global perspectives, interpersonal skills, and practical skills.

While there are limitations to leadership education and training programs and certain leadership traits may be inherent, this researcher argues that, to a large extent, leadership can be taught via formal instruction and leadership development programs. Leaders and aspiring leaders reported that they learned leadership by observing effective leaders and avoiding ineffective leaders' behaviors. Leadership education classrooms give students opportunities to test out leadership theories in discussions of case studies and films and in projects that require leadership students to apply practical and theoretical understandings of leadership (Billsberry, 2009). Aligned with this study's findings, mentorship and real-world experiences play important roles in the development of leadership epistemologies.

Kolb's (2014), Lewin's (1951), Dewey's (1938), Vygotsky's (1978), Guthrie and Jones (2012), and Bandura's (1977) theories align with this study's findings. Kolb (2014) conceptualized learning as a cyclical process, not a series of outcomes. This process is continually grounded in experiences, and there is a dialectic relationship between real-world problems and the resolutions adapted to contend with these problems. According to Kolb (2014):

Learning is the major process of human adaptation. This concept of learning is considerably broader than that commonly associated with the school classroom. It occurs in all human settings, from schools to the workplace, from the research laboratory to the management board room, in personal relationships and the aisles of the local grocery. (Chapter 2, para. 42)

Learning leadership, as learning many other skills and aptitudes, is a continuous process that happens through formal and informal educative experiences. Lewin (1951) theorized learning as a

cyclical feedback loop of observation and reflection, abstract cognition and theoretical thinking, testing of concepts and theories, and concrete experiences. Dewey (1938) conceptualized learning as a dialectic process of observation, experience, judgement, and action. Guthrie and Jones (2012) developed a theoretical framework for learning leadership by experience and argued “concrete experience is ‘learning by encounter,’ which can be learning from specific experiences, relating to different people and their experiences, or being sensitive to feelings and people” (p. 54). Participants in this study described experiential and social learning theoretical frameworks in practice. Theoretically and practically, the effective learning of leadership is a holistic and cyclical process, often developed through experiences, reflection, mentorship, and formal leadership education.

Mentorship, in the form of assistance and modeling from a more capable colleague, can help the aspiring leader develop leadership competencies and problem solving abilities through collaboration much as Vygotsky (1978) discussed in the development of human cognition and the learning of a variety of skills. Vygotsky (1978) theorized that people learn to push their own boundaries of thinking and doing with aid from someone more competent or skilled in a particular area. Similarly, Bandura’s (1977) Social Learning Theory suggested that people identify with others whom they deem as models and then replicate the behaviors that they have observed in the people with whom they identify. These social learning phenomena resemble participants’ descriptions of relationships with mentors and with negative models that they intentionally avoided replicating.

Research Design and Methods

This study used quantitative methods, a descriptive design, and survey data to provide “numeric description of trends, attitudes, or opinions of a population by studying a sample of that population” (Creswell & Creswell, 2018, p. 12). The design’s aims were to provide insights on how leadership epistemologies are developed and how experience and formal education contribute to these. “Good descriptive studies provoke the ‘why’ questions of analytic (cause-and-effect) research” (Eich Drummond & Murphy-Reyes, 2018, p. 157). The researcher’s survey instrument was designed to answer questions about leadership teaching and learning as well as factors influencing leadership development and practice.

Studying Perceptions

Lau (2017) contended that exploratory survey studies such as this one “are used to investigate and understand a particular issue or topic area without predetermined notions of the expected responses. The design is mostly qualitative in nature, seeking input from respondents with open-ended questions focused on why and/or how” (para. 6). Applicable insights were derived by analyzing first-person experiences of being taught and learning leadership; perspectives on leadership from people who serve as leaders in diverse capacities; and perspectives on leadership from those who are not in traditional leadership positions but who observe and interact with leaders.

Sampling

The researcher used purposive (non-random) sampling, which was a non-representative subgroup of a larger population and sampled for the specific purpose of exploring perceptions of leadership and leadership development in education organizational settings. Ary et al. (2019) defined purposive or judgement sampling as non-probability sampling based upon participant criteria such as expertise, special knowledge, and willingness to participate in research on leadership. The researcher recognizes that typical opinions and attitudes may change over time.

There were 486 e-mail invitations sent to request participation in the online survey, and 132 participants agreed to participate in the survey for a response rate of 27.16%. Because this study's purpose is to gain insights on research questions with the use of individuals' perceptions and reports of first-hand experiences, response rate is less important than when researchers seek to measure effects or make generalizations about larger populations. Cook, Heath, & Thompson (2000) found in their meta-analysis of 68 web surveys a mean response rate of 39.6% for online surveys. Finchman found (2008) response rates of 25% or higher are generally typical and acceptable in survey research. This study's response rate aligns with its purpose to explore a topic and discover applicable insights via survey data.

Participants

One-hundred-thirty-two college, university, and K-12 faculty, staff, and administrators participated in the study. They were selected based on their positions at educational institutions, their interest in leadership topics, and their willingness to participate in research. Eighty-nine (67.42%) were administrators, 25 (18.94%) were faculty members, and 18 (13.64%) were staff. Forty-five (34.09%) were male, and 87 (65.91%) were female. These participants were selected to gain a better understanding of leadership development and attitudes about leadership in educational organizations.

Procedures

The researcher obtained faculty, staff, and administrator email addresses from diverse educational institutions representing the southeastern, northeastern, southwestern, midwestern, and western United States. These participants were invited via email to participate in the study and complete the survey via SurveyMonkey, a web-based survey program. The survey instrument presented a consent document prior to potential participants taking the survey. Clicking on the "agree" box of the consent document demonstrated consent to take the survey.

Quantitative Survey Instrument

Using the study's research questions and literature on leadership competencies, learning, and challenges (American Association for Community Colleges, 2018; Black, 2015; Carpenter-Hubin & Snover, 2013; Harnisch, 2019), the researcher developed an online survey questionnaire to gather perceptions of faculty, staff, and administrators at educational institutions on leadership and leadership development.

The survey consisted of 13 items. Four demographic, two Likert scale, two ranking, and five open-ended questions were included. Open-ended questions were coded and analyzed for

frequencies of specific themes. Ranking questions were analyzed based on frequency and ranking of selections and categories added by participants. Likert scale questions were analyzed based on strength of attitude indication on the scale. Participants had the option to skip questions that were not applicable or that they elected not to answer.

Participants were asked about their positions at educational institutions; faculty, staff, and administrators were included. All others were excluded. Participants were asked their age, gender, and ethnicity. Participants who were leaders responded to questions about their leadership preparation. Participants were asked to indicate whether leadership could be taught, to rank leadership competencies in order of importance, and to indicate the top three significant challenges leaders face. Participants also provided written responses, discussing leadership knowledge, leadership learning, the most significant areas where leaders need to improve, leadership professional development, and, if they had participated in leadership professional development, how that education manifested itself in their leadership work.

Quantitative Data Analyses

The Statistical Package for the Social Sciences (SPSS) version 25 was used for the quantitative analysis of this research. Participant survey response data were imported from SurveyMonkey into SPSS files. Descriptive statistics were used for Likert scale and ranking questions about leadership learning, leadership preparedness, leadership competencies, and leadership challenges. Comment data were coded and subsequent themes emerged during the note-taking and coding processes. Responses to the Likert survey items used a 5-point Likert scale, ranging from “1” (strongly disagree) to “5” (strongly agree); missing responses or NA response received a score of “0.” Ranking questions were scored based on frequency and ranking levels.

Overview of Quantitative Findings

Table 1

Leadership teachability (N = 132)

<u>Leadership can be taught^a</u>	<u>n</u>	<u>%</u>
Strongly Agree (5)	45	34.09
Agree (4)	69	52.27
Neither Agree nor Disagree (3)	13	9.85
Disagree (2)	5	3.7
Strongly Disagree (1)	0	0

^a Mean = 4.24; SD = 0.722

Table 2

Leadership Preparedness (N = 122)

<u>If a leader, I was prepared for leadership^a</u>	<u>N</u>	<u>%</u>
Strongly agree (5)	27	22.13%

Agree (4)	64	52.46%
Neither agree nor disagree (3)	16	13.11%
Disagree (2)	2	1.64%
Strongly disagree (1)	13	10.66%

^a Mean = 3.83; *SD* = 0.942

Table 3

Top three most significant leadership challenges

<u>Leadership challenges</u>	<u><i>n</i></u>	<u>%</u>
Dealing with personnel matters	94	71.76%
Navigating institutional, local, or state politics	84	64.12%
Managing complex budgets/managing budget cuts	58	44.27%
State mandates	48	36.64%
Turn-over in leadership positions	31	23.66%
Turn-over in faculty and staff positions	28	21.37%
Performance-based funding	27	20.61%
Other	18	13.74%

Discussion of Quantitative Findings

The majority (74.54%) of participants who were leaders reported being prepared for leadership positions. The majority (86.36%) of participants reported that leadership can be taught, with only 3.79% indicating that leadership is not a teachable skill. Participants reported that leadership can be learned through attending classes and workshops, pursuing degrees, being mentored by seasoned leaders, gaining on-the-job experience, and participating in leadership degree and development programs. Participants reported that some of the most important leadership skills and potential growth areas for leaders were communication and human relations skills. Participants emphasized the importance of experiential learning in leadership development.

Abilities to create positive work environments, communicate to constituent groups, lead change, and manage and supervise personnel were the top-ranked leadership competencies. Dealing with personnel matters; navigating institutional, local, and state politics; and managing complex budgets and budget cuts were listed as the top challenges leaders face. Open-ended responses suggested additional challenges leaders face such as compliance issues, unclear directives/goals, and internal and external relations. Participants suggested that leaders should possess effective interpersonal skills and the abilities to develop clear goals and execute strategic plans.

The percentage (74.54%) of current leader participants who agreed or strongly agreed that they were well prepared for leadership and the positive nature of responses from those who said they had engaged in some leadership education suggest that these participants' leadership education and experiences prepared them well for their leadership positions. This is a positive reflection on many current leadership development and degree programs. Although many leaders

felt prepared, 12.3% of participants who were leaders disagreed or strongly disagreed that they were developed for leadership positions, and 13.11% neither agreed nor disagreed that they were well equipped for leadership positions. Those who were not leaders indicated “not applicable” and were not included in these percentages.

These results suggest that there is a need to prepare potential leaders more holistically. Participants discussed leadership development workshops, leadership coursework, on-the-job experiences, and mentoring opportunities that had assisted them on their leadership journeys. These are possible strategies for leadership development and education programs.

Discussion of Findings from Written Comments

The written comments provided additional insights about the teaching and learning of leadership and implications for leadership education pedagogy and curricula.

The Teaching and Learning of Leadership

In comments on leadership learning, there was a prominent theme of experience being the most effective method for learning leadership, especially related to facing challenges and learning from mistakes. A participant commented, “Leaders also learn by doing—making mistakes and learning from them is a powerful experience.” The second most mentioned method of learning leadership was through being mentored by a colleague or superior. One comment mentioned: “A mentoring program. You meet with a leader you admire once a week to discuss different case studies and how to handle them.” Nearly equivalent in comments for this question were observing others model good and bad behaviors, researching, and learning from formal education. One participant stressed that leadership learning occurred holistically over time: “People can learn leadership, but it takes time—not just a class or seminar. It’s best taught over a lifetime of mentorship, taking a lead and making mistakes, learning from others’ mistakes, and possibly direct instruction.” Participants mentioned networking and working with others as ways to learn leadership. Few indicated that leadership is an innate ability. Prominent in these discussions were themes related to learning theories discussed in the literature review above. Engaging in real-world experience, reflecting, adjusting and adapting, and receiving support from more competent colleagues or supervisors were reported by participants as aiding in leadership development.

Leadership Education Manifestation in Work

Participants frequently reported that leadership education helped them to develop communication skills and human relations skills. Participants also reported leadership education led to improved leadership skills and the initial development of leadership skills. According to participants, leadership education led to greater self-reflection, the ability to see multiple and broader perspectives, and the development of relationships with mentors. One participant mentioned, “These opportunities have helped me to create a more positive environment, collaborate more often, and delegate responsibilities as needed.” Another participant mentioned that “[It] improved my understanding of working with different types of people and how to engage them.” Communication skills were often cited. A participant remarked, “I am willing to communicate differently or try something new based on a best practice.” Human relations skills and teamwork

mentioned in responses to this question and others reflect the social nature of leadership work and leadership learning.

Few participants mentioned that leadership education did not help them in their roles as leaders. According to one participant, “The [leadership] classes provided little value as none of the instructors had actually led a complex organization,” suggesting the importance of leadership educators having significant leadership experience and using that experience in their teaching.

Areas Where Leaders Need Improvement

Participants reported that leaders needed improvement in people skills, emotional intelligence, supervision, leadership skills, communication, and the creation of positive work environment. Participants reported that leaders needed to be able to adapt to change and deal with difficult management and supervision issues. According to one participant, “Developing the ability to anticipate changes that may occur in the field and adapting plans and leadership skills to meet those changes.” Another participant suggested that “cooperation and team building is the only way to handle complex management situations.” The researcher noted this emphasis in human relations skills and emotional intelligence instead of technical skills such as managing budgets, fundraising, using technology, and strategic planning. This aligns with other studies suggesting the importance of emotional intelligence in educational leadership (Parrish, 2015; Sanchez-Nunez, Patti, & Holzer, 2015). One participant responded:

Collaboration amongst departments is lacking. Often in higher ed there are silos amongst ... areas instead of a cohesiveness. Leaders also do not listen well to their staff. They assume they know what is best because they are in the position that they are in instead of looking at staff as the vital parts of the engine that make everything work on a daily basis.

Comments also included themes of leaders’ needing improvement in the areas of ego and ethics. Participants reported that leaders needed to develop greater senses of empathy and to demonstrate that they value people. This is not to say that participants did not value technical or management skills. One participant commented, “Time management, recognizing effective instruction, and data analysis to inform outcomes and data analysis to inform outcomes.” Several mentioned budget and financial management, delegation, time management, and change management.

Professional Development to Help Leaders and Aspiring Leaders

Participants most frequently reported that formal leadership training in the form of degrees and specific leadership development programs helped leaders learn leadership. Specific types of leadership training mentioned were the following: human relations and communication skills professional development; the use of case studies and research; and specialized training in law, budgets, policy, planning, conflict resolution, and time management. Formal educational programs were often suggested. Participants frequently suggested that mentorship and on-the-job training and experience were important in professionally developing leaders. One participant reported, “Opportunities for relationship-based professional development and practice-based coaching would be the most beneficial.” Another reported, “Give them hands-on opportunities - SHOW them what works, and then explain WHY. Have them shadow stand-out leaders and see success in action.” Participants responded in ways that align with social learning theories and experiential learning theories such as Bandura’s (1977) and Guthrie and Jones’ (2012). Participants suggest

that learning leadership occurs through closely working with others, gaining meaningful experiences related to their work lives, and then having opportunities to apply their learning to their own leadership practices.

What Learners Need to Know and Be Able to Do

Participants detailed many specific aspects of leadership that they deemed important. Participants reported that leaders need to develop the following abilities: construct an organizational vision, be transparent, follow through, make unpopular decisions when necessary, communicate clear expectations, avoid ego-driven behavior, prioritize, use data, and involve others in decision making when appropriate. Similar to responses to other survey questions, communication and human relations skills were often mentioned. A participant reported, “Effective communication and listening skills are a must. Not only do people need to be able to communicate but they need to be good listeners and followers as well in order to be a good leader.” Participants noted that leaders needed to listen, communicate well, collaborate effectively with diverse groups, and develop trusting relationships with constituents. Reflecting and acting upon feedback were also themes. The following were representative comments: “Need to know the importance of being wrong about something and acknowledging it to staff.” “They need know how to participate in reflection and reflective supervision.” Participants reported that leaders need to be able to engage in significant amounts of self-reflection by recognizing weaknesses, receiving and using feedback, and acknowledging mistakes.

Implications for Future Research and Leadership Development Programs

Every business and organization has leaders. Leadership skills are crucial to organizations’ successes and people’s livelihoods. Education leaders and others have described a crisis in leadership because of retirements in the coming decade, the demand for effective leaders, and the need for preparation and professional development of those who will enter leadership positions (Young et al., 2018). These findings have implications for leadership educators, for leaders who wish to improve their skills, and for those seeking best practices for teaching and learning leadership. For participants in this study, learning leadership through experience was essential and helped them develop emotional intelligence, communication skills, and cultural intelligence, and experience prepared them for future challenges.

Several key implications include the importance of human relations skill development, ethical development, mentorship, opportunities to learn leadership in on-the-job or realistic contexts, self-reflection, and leadership development programs that provide theoretical and practical frameworks for leadership. Leadership educators may apply these insights to their curricular designs and pedagogical approaches. Buchanan (2017) contended, “the skills and capacities required of professors are different for active learning as they create a container, or psychological holding space, in order for students to learn, resist, challenge assumptions and try on ideas like new clothes” (p. 605). These new or adapted approaches may require both instructors and students to push the boundaries of traditional leadership classrooms. McMahon (2012) suggested that while ethics education is a prominent part of business and management school training, the regularity of leaders’ ethical lapses calls into question the effectiveness of such training. McMahon argued for the need for the development of servant leadership rather than reliance on traditional ethics education. Faculty, for example, may create assignments or curricula

that require active engagement inside and outside of the classroom environment such as through service learning, real-world projects, opportunities for students to lead groups, and internships. The emphases on experiential education, service learning, and critical reflection facilitate students' holistic development as ethical, competent, servant leaders.

Further research may examine the application of these findings on leadership education curricula and pedagogy. Possibilities for educational leadership programs include the following: implementing mentorship programs, integrating more experiential curricula related to ethics, creating internships to provide real-world experiences such as those related to budgeting or dealing with political/personnel scenarios, and integrating self-reflection and human relations skills into curricula. Critical to the subsequent development and measurement of metrics for the effectiveness of such pedagogy and curricula is the examination of how leadership education is reflected in leadership students' leadership practices.

While debates may continue about whether leadership can be taught and how leadership is learned, participants in this study largely reported that leadership can be taught, and many described how they were taught and learned leadership. Although some may have certain charismatic or other personality characteristics that aid them in their leadership trajectories, participants frequently reported that leadership education programs assisted them in developing several critical leadership competency areas such as communication and human relations skills.

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Using Research on Neuroeconomics Games in School Leaders' Decision-Making Training

This manuscript has been peer-reviewed, accepted, and endorsed by the International Council of Professors of Educational Leadership (ICPEL) as a significant contribution to the scholarship and practice of school administration and K-12 education.



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This article demonstrates how to use three neuroeconomics games adapted from game theory—the Ultimatum Game, the Trust Game, and the Public Goods Game—in school leaders' decision-making training. These three games have been commonly used in the emerging field of neuroeconomics—an interdisciplinary field intersecting behavioral economics, psychology, and cognitive neuroscience. For each game, I first outline how to play it in the training of school leaders' decision making, followed by the constructs relevant to leaders' decision making, including fairness, justice, inequity aversion, reciprocity, emotions, social identity, trust, distrust, and altruistic punishment. These games, with a lighthearted touch, serve as part of the pedagogical support to help school leaders uncover salient constructs relevant to their decision-making process.

Keywords: altruistic punishment, decision making, distrust, emotions, inequity aversion, neuroeconomics, educational leadership, fairness, equity, justice, social identity, trust

This article demonstrates how to use three neuroeconomics games adapted from game theory—the Ultimatum Game, the Trust Game, and the Public Goods Game—in training school leaders’ decision making. Neuroeconomics is an emerging, interdisciplinary field intersecting three fields: (1) behavioral economics—the field studying human decision making and the ensuing behaviors, (2) psychology—the field studying human mind and behaviors, and (3) cognitive neuroscience—the field studying brain mechanisms of mental processes. To date, the decision-making training in school leadership preparation programs has mostly centered around data-driven, evidence-based decision making (Cannata et al., 2017) and shared, participative decision making (Ni, Yan, & Pounder, 2018). The scant presence of theoretical constructs and theories on decision making in educational leadership field is in stark contrast with the robust research on decision making in behavioral economics, psychology, and cognitive neuroscience (Wang, 2019a). A few examples could suffice. As one of the pioneering researchers in behavioral economics, Daniel Kahneman’s work on the psychology of decision making challenged the assumption of rationality in human decision making, and was awarded the 2002 Nobel Prize in Economic Sciences (Kahneman & Tversky, 1979; Kahneman, 2011). Following this fledgling and fast-growing line of research, Richard Thaler’s work on irrational, abnormal decision making that did not fit classic economic theories was awarded the 2017 Nobel Prize in Economic Sciences (Thaler, 2016). Other recent work on decision making includes Dan Ariely’s detailed account of *predictably irrational* decision making and human behavior (Ariely, 2008), Antonio Damasio’s (1994) compelling argument from the neurobiological view on the inseparable role of emotions in reasoning and decision making, as well as Jonathan Haidt’s (2012) elephant-rider analogy that most moral decisions are made by the elephant (i.e., our unconscious intuitions that encompass emotions and biases), and the rider (i.e., reasoning) can sometimes rein in the elephant but oftentimes provide post hoc rationalization of the decisions. This rich body of research has provided telling evidence on psychological and brain mechanisms of human decision making. Yet these compelling findings have not been fully capitalized on in decision-making training in school leadership preparation programs (Duke, 2018).

Building on the current focus on data-driven, participative decision making in school leadership preparation programs, to advance the training of leaders’ decision making, this article draws attention to the recent neuroeconomics research findings to enrich school leaders’ understanding of human decision-making process. In the field of educational leadership, Lakomski and Evers (2010) drew upon cognitive neuroscience findings to assert the limitations of rationality in decision making, argued for the essential role of emotions in decision making, coined the phrase *passionate rationality*, and called for including emotions in school leadership preparation programs. Regarding school leaders’ decision making, the Professional Standards of Educational Leaders (formally known as the Interstate School Leaders Licensure Consortium Standards) have two references: one is under Standard 2 Ethics and Professional Norms (a) “act ethically and professionally in personal conduct, relationships with others, decision-making, stewardship of the school’s resources, and all aspects of school leadership” (p. 10); the other is under Standard 3 Equity and Cultural Responsiveness (g) “act with cultural competence and responsiveness in their interactions, decision making, and practice” (p. 11; National Policy Board of Educational Administration, 2015). To that end, to offer practical guidance on school leaders’ decision-making training, this article demonstrates how three commonly used neuroeconomics games (Glimcher & Fehr, 2014)—the Ultimatum Game, the Trust Game, and the Public Goods Game—can be used to teach decision making in school leadership preparation programs. The three games introduced in this article, as part of the pedagogical support for ethical and culturally responsive school

leadership training (Mullen, 2017), are powerful tools to uncover salient aspects of decision-making processes. These games, with a lighthearted touch, are actually experiments used in research on social decision making—the decisions made in a social context in which decision outcomes involve other people. These games are particularly important to reveal implicit biases and unconscious automaticity of emotions in decision making. Using the games as a proxy for teaching decision making, students in school leadership preparation programs participate in the decision-making games themselves, reflect on their own decision making process and behaviors, followed by group discussions on the constructs related to decision making (e.g., fairness, justice, inequity aversion, reciprocity, emotions, social identity, trust, distrust, and altruistic punishment) and how to translate the constructs to leadership practices. This game-approach decision-making training aims to achieve four learning goals: (1) identifying the blind spots of data-driven decision making, (2) describing the constructs of decision making, (3) reflecting on students' own decision-making processes, and (4) creating a plan to optimize decision making in professional settings. In the following pages, I first provide an overview of the blind spots of data-driven decision making, one of the dominant decision-making approaches taught in school leadership preparation programs. Next, I outline how the three neuroeconomics games can be used in school leadership preparation programs, followed by the constructs demonstrated by the games.

The Blind Spots of Data-Driven Decision Making in Social Decisions

The current training on decision making in school leadership preparation programs primarily teaches school leaders to make decisions driven by data. The theory guiding such a decision-making approach is the rational choice theory, also called the theory of utility maximization, the centerpiece of classic economic theories of decision making at both individual and organizational level (March, 1991; Smith, 1776/1981). Tacitly assuming that decision makers are rational, this decision-making approach uses data as the means to an end: the data as the means of information on choice alternatives, consequences, and preference ranking of the alternative consequences; decisions are the end of maximized utility (i.e., desirable consequences and outcomes). Despite the value of data-driven decision making, there are many blind spots that warrant school leaders' attention, including, but not limited to, the politics of data use (Henig, 2012; Parkhurst, 2017) and the inadequate role of data in social decisions—the decisions made in a social context and the decision outcomes have an impact on others. Here I focus on the blind spots of data-driven approach to making social decisions.

If data are the means to an end of decision making, then what does the end look like? What are the desirable outcomes of school leaders' decisions? What if there is a tension between leaders' self-interest (e.g., to advance the leader's career) and the group interest of the teachers and students? If the leaders allow their self-interest to override the group interest, then the decision is considered rational from the leaders' viewpoint, because the leaders attempt to maximize the utility (i.e., their self-interest in this case), according to the rational choice theory. But is this the optimal decision for the group? Imagine a school leader advances his or her career by all means possible. People might think such a leader is calculating, ruthless, and cold-hearted. The literature in educational leadership does argue that a school leader's decision making is not a zero-sum game, and a leader should cooperate with teachers to achieve the win-win outcomes (Shen & Xia, 2012). But when cooperation means that a leader sacrifices self-interest, what motivates the leader to cooperate? How does a leader evaluate the risk of cooperation? In the case of the trade-off between

the leaders' self-interest and group interest, data-driven decision making does not seem to provide specific, practical guidance for school leaders as decision makers.

Also, imagine a school leader who has finite resources that can be allocated to meet the learning needs of a fixed number of students. Should the leader allocate the resources to low-performing students whose academic enhancement might not yield a substantial improvement in the school rating in school accountability system in the short term, or to those students whose academic achievement can ensure that the school rating has a solid grounding at the end of school year? In this case, the data-driven decision making, again, does not seem to have much explanatory power of school leaders' decision making and the resultant leadership behaviors.

With such limitations and ambiguity of data-driven decision making in a social context such as schools, this article introduces three neuroeconomics games that have been used to study the decision-making topics on fairness, justice, inequity aversion, reciprocity, emotions, social identity, trust, distrust, and altruistic punishment. These games enrich school leaders' understanding of what motivates people and what are the limits of human rationality. Although the games introduced in this article do not capture the full richness of human motivation and limits of rationality in decision making, they offer a pedagogical tool for school leadership training in decision making by drawing on the insights from neuroeconomics. Using the games to explore fascinatingly complex decision making in social settings, I first introduce how to play the games in the class of decision making, psychology, and ethics (applicable in both online and face-to-face instructions; see Figure 2, 4, and 6), followed by the constructs relevant to the decision-making training in school leadership preparation programs.

The Ultimatum Game

The Ultimatum Game, first introduced in 1982 (Güth, Schmittberger, & Schwarze, 1982), has been widely used to study decision making, particularly the decisions involved in bounded rationality, fairness, justice, inequity aversion, emotions, and social identity. Over the last three decades, there have been countless variations of the Ultimatum Game devised to study decision making. Nevertheless, the classic version of the Ultimatum Game is that two people (see Player 1 and 2 in Figure 1) are matched randomly and anonymously to play the game. Player 1 is endowed with a sum of money by the experimenter (say \$10), and proposes how to divide \$10 with Player 2. Player 2 then decides whether to accept the proposal or not. If accepted, both players take the money as it is proposed. If rejected, both players receive nothing. The two scenarios of Player 2's decision making (accept vs. reject) in the Ultimatum Game are displayed in Figure 1. The converging findings of decades of the Ultimatum Game research show that most people as Player 1s propose dividing 40%-50% of the money, and Player 2s usually accept such a proposal. This is a win-win situation as both players receive earnings. However, when Player 1 proposes sharing only 20% of the money, Player 2 rejects it half of the time; the rejection rate increases as Player 1 proposes even less money (van Damme et al., 2014).

Why are people willing to receive nothing by rejecting the offered money? The rejection decision contradicts the classic view of economic rationality. If we make rational, data-driven decisions to maximize the outcomes (earnings in this case), we as Player 1s should propose offering the smallest amount of money, and as Player 2s accept to take whatever the amount of money offered because we have nothing to lose. Even when Player 1 keeps 90% of the money, we as Player 2 still receive 10% of the money which is better than nothing. But over the last three decades of the Ultimatum Game research, people have consistently rejected low offers. Why?

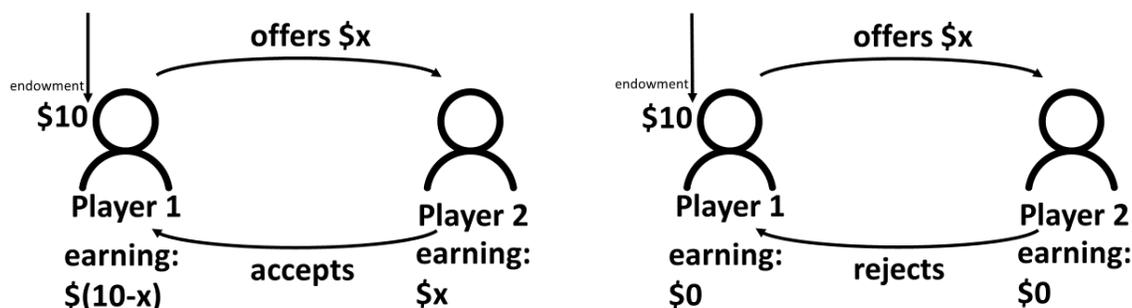


Figure 1. The Ultimatum Game

Fairness & Justice

The seemingly irrational decision of rejection in the Ultimatum Game is driven by fairness. People desire to be treated fairly, and they do not hesitate to punish those who treat them unfairly (van Damme et al., 2014). The magnitude of the rejection decision in the Ultimatum Game varies substantially across people in different countries, but participants in 15 populations (e.g., Ghana, Kenya, Tanzania, Colombia, Ecuador, Russia, and U.S. rural and urban) all demonstrate their willingness to administer costly punishment when they are treated unfairly (Henrich et al., 2006). This innate desire for fairness is termed as “self-centered inequity aversion” (Fehr & Schmidt, 1999, p. 819). In fact, resistance to inequity is not only universal among humans, but also seen among monkeys as evidenced by the aptly titled article “Monkeys Reject Unequal Pay” in the journal *Nature* (Brosnan & de Waal, 2003). We are so averse to unfair, inequitable outcomes that we react negatively to the point that we are willing to give up some material payoff to punish our social partners who treat us unfairly (Decety & Yoder, 2017). In the Ultimatum Game, the unfair offer from Player 1s triggers negative emotions such as anger and disgust, motivating Player 2s to reject the unfairness, even at the cost of losing what is offered to them. What motivates this decision of rejecting unfairness is considered as justice motivation: “people’s tendency to prefer justice” (Decety & Yoder, 2017, p. 7). This justice motivation is thus thought to be a primary mechanism for establishing and maintaining a social norm of cooperation.

The links among unfairness, negative emotions, and justice-motivated rejection decision in the Ultimatum Game have been supported by brain-imaging evidence. When Player 2s were put in a brain scanner, their rejection decision was associated with increased brain activity in the amygdala—the brain region processing emotions, particularly negative ones (Gospic et al., 2011; Zald, 2003). On the one hand, the more amygdala activity in Player 2s’ brain, the more likely they reject the unfair offer. On the other hand, when people have brain damage in the amygdala, they are typically generous in the Ultimatum Game and do not reject unfair offers (De Martino, Camerer, & Adolphs, 2010; van Honk, Eisenegger, Terburg, Stein, & Morgan, 2013). In addition to the emotional amygdala activity as a response to unfairness, the extent of the unfairness in Player 1s’ offer is correlated with Player 2s’ increased brain activity in another brain region called anterior insula (AI)—the brain area processing unpleasant emotions of disgust and anger, as well as pain and distress (Calder, Lawrence, & Young, 2001). Specifically, the increased activity in Player 2s’ AI *precedes* their decision of rejecting an unfair offer (Sanfey, Rilling, Aronson, Nystrom, & Cohen, 2003). Further, the emotional AI competes against the dorsolateral prefrontal cortex (dlPFC)—the brain region that supports our cognitive capacity and self-control over

impulsive behavior. Intriguingly, the rejection decision in the Ultimatum Game is associated with more activity in the emotional AI than the cognitive dlPFC; more activity in the cognitive dlPFC than the emotional AI (Knoch, Pascual-Leone, Meyer, Treyer, & Fehr, 2006; Sanfey et al., 2003). Put differently, Player 2s' decisions of acceptance or rejection is the outcome of the interactions between cognition and emotions. The acceptance decision is made when the cognitive dlPFC overrides the emotional AI, enabling Player 2s to maximize their earning by taking the offered money and inhibiting their emotional desire to reject the unfairness. By contrast, the rejection decision is not driven by purely data or decision makers' cognitive capacity, but by the negative emotions such as anger and disgust.

To further examine the social aspect of decision making, Player 1 in the Ultimatum Game is sometimes a computer (non-social condition) and other times a human (social condition; Sanfey et al., 2003). When the unfair offer comes from a computer, Player 2s are more likely to accept the unfair offers. Player 2s, however, have a stronger emotional reaction to the unfair offer coming from a human, as evidenced by the stronger activation in emotion-related brain regions (e.g., the AI and anterior cingulate cortex). These differing brain activity patterns suggest that the emotional reaction to unfairness does not come from the amount of the offer itself, as both computer- and human-Player 1 offered the same amount of money. Rather, the emotional reaction is subject to who makes the offer and the unfair intention of our social partners.

Further, in social decision making, fairness is not a static construct. Fairness evolves with the unfolding history of social interactions through which people's reputation is developed. In the Ultimatum Game that is *repeatedly* played, when Player 1s can access the information on Player 2s' past accepted offers, the fairness and cooperation are more likely to emerge (Nowak, Page, & Sigmund, 2000). On the end of Player 2s, when they accept unfair offers, they form the reputation of being weak and their chance of being treated unfairly in the future will increase. However, when they reject unfair offers even at the cost of their own earnings in the Ultimatum Game, they develop a reputation of insisting on fairness. Therefore, "when reputation is included in the Ultimatum Game, adaptation favors fairness over reason" (Nowak et al., 2000, p. 1774). Suffice it to say, fairness evolves in social interactions, and is subject to social partners' past decisions in social interactions.

You are to propose to the other person on how to divide a \$10 endowment between you and the other person.
 If the other person accepts your offer, both of you take the money as it is proposed.
 If the other person rejects your offer, both of you receives no money.
 As a proposer, please use the bar to mark how much money you want to offer to the other person?

0 1 2 3 4 5 6 7 8 9 10

1



As a responder, please indicate whether you accept or reject the other person's proposal on how to divide the \$10 endowment.

	Accept	Reject
If the other person keeps \$9 and gives you \$1, would you accept the offer?	<input type="radio"/>	<input type="radio"/>
If the other person keeps \$8 and gives you \$2, would you accept the offer?	<input type="radio"/>	<input type="radio"/>
If the other person keeps \$7 and gives you \$3, would you accept the offer?	<input type="radio"/>	<input type="radio"/>
If the other person keeps \$6 and gives you \$4, would you accept the offer?	<input type="radio"/>	<input type="radio"/>
If the other person keeps \$5 and gives you \$5, would you accept the offer?	<input type="radio"/>	<input type="radio"/>
If the other person keeps \$4 and gives you \$6, would you accept the offer?	<input type="radio"/>	<input type="radio"/>
If the other person keeps \$3 and gives you \$7, would you accept the offer?	<input type="radio"/>	<input type="radio"/>
If the other person keeps \$2 and gives you \$8, would you accept the offer?	<input type="radio"/>	<input type="radio"/>
If the other person keeps \$1 and gives you \$9, would you accept the offer?	<input type="radio"/>	<input type="radio"/>
If the other person keeps \$0 and gives you \$10, would you accept the offer?	<input type="radio"/>	<input type="radio"/>

Figure 2. A screenshot of using the Ultimatum Game in decision-making instruction in a school leadership preparation program. It was set up on the author's university Qualtrics platform. The students fill out the survey in class on their laptops or smartphones via a weblink provided by the instructor. The instructor then uses the students' real-time results to introduce the constructs related to decision making, including rational choice, fairness, justice, reciprocity, emotions, and social identity.

Emotion Expression, Regulation, and Induction

Given the role of negative emotions in making rejection decisions in the Ultimatum Game, the opportunities of expressing negative emotions hold sway over people's decision making. We humans prefer to express emotions when they are aroused (Darwin & Ekman, 1998). The desire to express negative emotions can itself be an important motivation underlying the decision of rejecting unfairness to carry out costly punishment (Xiao & Houser, 2005). In Xiao and Houser's (2005) study, Player 2s have an opportunity to write a message to Player 1 simultaneously with

their decision to accept or reject Player 1's offer. When Player 2s express emotions, they are more likely to accept the unfair offer, because the costly punishment decision of rejection occurs in part as a means to expressing negative emotions (e.g., anger and disgust). To that end, providing channels for people to express their negative emotions is a cost-effective approach to maximizing the earnings of both Player 1 and 2 in the Ultimatum Game. The implication of this finding for school leadership training is to encourage leaders as decision makers to create opportunities for people to express their emotions in order to promote cooperation as the social norm. This is because the lack of opportunities to express negative emotions can increase the emotion-laden costly punishment behaviors in organizations.

In addition to expressing emotions, emotion regulation during social interactions has been studied using the Ultimatum Game. Recall the brain region that provides cognitive control in decision making—the dlPFC. To impose cognitive control over emotions, the neurons (i.e., brain cells) in the dlPFC are active to rein in emotions. To ensure that neurons function well, neurotransmitters (i.e., a type of molecules) take on the role of relaying messages from one neuron to another. It is found that neurotransmitter serotonin is involved in decision making in the Ultimatum Game. As noted previously, with our justice motivation, when treated unfairly, we are motivated to punish and retaliate. To refrain ourselves from this aggressive impulse in the face of perceived injustice, serotonin modulates our impulsivity through regulating our emotions. In the Ultimatum Game, when Player 2s' serotonin level is temporarily lowered, they are more likely than the placebo-controlled Player 2s to reject unfair offers, but not fair offers (Crockett, Clark, Tabibnia, Lieberman, & Robbins, 2008). This is because neurotransmitter serotonin is responsible for the function of the brain regions such as the dlPFC and ventral PFC that regulate our emotions (Clarke, 2004).

Inducing emotion also influences decision making in the Ultimatum Game. Player 1s make more generous offers when they are induced the emotion of empathy by watching short video clips of a father sharing his experience with his two-year-old son with terminal brain cancer (Barraza & Zak, 2009). Further, inducing empathy elevates levels of oxytocin—the neurotransmitter associated with social bonding, trust, and generosity (Kosfeld, Heinrichs, Zak, Fischbacher, & Fehr, 2005). A more detailed role of neurotransmitter oxytocin in social decision making is discussed in the section of the Trust Game.

Social Identity

The third construct can be taught by using the Ultimatum Game in training school leaders' decision making is social identity: the socially constructed identity based on ethnic, religious, socioeconomic, and other social categorizations (Roccas & Brewer, 2002). Our social identity influences our decisions in an implicit, unconscious manner. Given the unconscious nature of implicit bias, decision makers may not even be aware of their implicit in-group bias towards those who share their social identity (Haslam, Reicher, & Platow, 2011). Therefore, the Ultimatum Game is a telling way to reveal how decision makers may unknowingly make decisions that are biased towards in-group members, manifested by in-group favoritism and out-group hostility. In one Ultimatum Game study conducted in Israel, Player 2s' names were shared with Player 1s: the first name was a strong signal of Player 2's gender; the last name suggested whether Player 2 immigrated from European or Arab countries, with the latter being from a typically lower socioeconomic background (Fershtman & Gneezy, 2001). To the participants' surprise, male participants made statistically lower offers to the immigrants from Arab countries. In the same

vein, the participants with different cultural backgrounds interacted in the Ultimatum Game differently when they played with the opponents sharing and not sharing their cultural identity. For instance, Westerners (UK participants) and Asians (Malaysian Chinese participants) played differently with participants of their own group than with those of the other group (Chuah, Hoffmann, Jones, & Williams, 2007). The similar findings were also reported among the participants from Hispanic and Navajo cultures in the southwestern United States (Ferraro & Cummings, 2007). Further, it was observed that in the Ultimatum Game, regardless of the ethnic groups, participants accepted more unfair offers from White participants than African Americans (Kubota, Li, Bar-David, Banaji, & Phelps, 2013). These converging findings are particularly important in training school leaders to be culturally responsive, as they gain an understanding of how their own social identity implicitly influences their decisions and ensuing behaviors (Wang, 2019a).

Individual Variances

Individual variances have been observed in people's decision making in social settings. First, people, according to over three decades of research using the Ultimatum Game, demonstrate a varying degree of preference for fairness: some participants do not care about fairness at all; others have a strong preference for fairness (van Damme et al., 2014). This is in agreement with the literature on justice sensitivity: how individuals react to experiences of unfairness and injustice (Yoder & Decety, 2014). People differ in their inclination to perceive injustice and the extent of their cognitive, emotional, and behavioral reactions (Gollwitzer, Rothmund, Pfeiffer, & Ensenbach, 2009).

In addition to explain the rejection decision in the Ultimatum Game through people's preference for fairness (Fehr & Schmidt, 1999), another explanation is that low offers are viewed as challenges, and people who seek dominance in social interactions are unlikely to bow down to challenges, but to reject the low offer in order to demonstrate aggression and cement dominance in interactions. Indeed, this explanation is attested by the evidence that men who reject low offers in the Ultimatum Game have significantly higher testosterone levels than those who accept low offers (Burnham, 2007). This is because among men, there is a consistent, positive correlation between high levels of testosterone and aggression (Book, Starzyk, & Quinsey, 2001), as well as high-testosterone men and seeking social dominance (Dabbs, 1997). Consistent with this view, one study reported that testosterone injections increase the likelihood of rejection decision among male participants in the Ultimatum Game (Kouri, Lukas, Pope, & Oliva, 1995), which suggests that men with naturally high testosterone levels are more likely to reject low offers in the Ultimatum Game. Recall the study that inducing empathy increased oxytocin level and generosity in the Ultimatum Game (Barraza & Zak, 2009). The same study also found that empathy-oxytocin response was stronger in women than in men. This finding can be explained by the opposite effects of oxytocin and testosterone: oxytocin increases social bonding and trust; whereas testosterone is associated with aggression and dominance in the context of competition (Crespi, 2016). Further, testosterone is associated with in-group favoritism as well. In one study, the researchers recruited male soccer fans to play the Ultimatum Game. In the game, the participants were matched by their favorite team (in-group) or their rivalry team (out-group). The participants' testosterone level was associated with a pronounced degree of in-group favoritism: Player 1s' high testosterone levels predicted generous offers to in-group members; Player 2s with higher testosterone levels rejected offers from out-groups more often (Diekhof, Wittmer, & Reimers, 2014).

Taken together, the Ultimatum Game serves as a simple but powerful pedagogical tool for decision-making training in school leadership preparation programs. The rich empirical evidence of the Ultimatum Game research on fairness, emotions, social identity, in-group bias, and individual variances enrich school leaders' understanding as they make social decisions that affect teachers, students, parents, and communities.

The Trust Game

The Trust Game (Berg, Dickhaut, & McCabe, 1995; see Figure 3) is another game commonly used to study decision making. Similar to the Ultimatum Game, Player 1 is endowed with a sum of money, say \$10. Player 1 can send all, some, or none of \$10 to Player 2. In the Trust Game, however, every dollar sent by Player 1 to Player 2 is tripled by the experimenter. Player 2 receives the tripled amount, and then decides to send all, some, or none of the tripled amount back to Player 1. The amount sent by Player 1 to Player 2 is a measure of trust; the amount returned from Player 2 to Player 1 is a measure of trustworthiness (Ben-Ner & Halldorsson, 2010). Player 1s, on average, send about 50% of the endowment (Berg et al., 1995), but vary by cultural backgrounds and age. Specifically, in a meta-analysis of 162 replications of the Trust Game involving over 23,000 participants, African participants send less money than those in North America (Johnson & Mislin, 2011). Regarding age, in one Trust Game study with 662 participants from 8-year olds to the retired, trust increases linearly from early childhood to early adulthood, and then stays constant throughout adulthood; whereas trustworthiness increases with age (Sutter & Kocher, 2007). The Trust Game can be used in the school leadership preparation programs to teach the decision making-relevant constructs of trust, distrust, and altruistic punishment.

Trust & Distrust

The Trust Game, as the name implies, can be used to teach the construct of trust in decision making. The research using the Trust Game has provided a nuanced understanding of trust. In one of the seminal studies on trust and decision making, neuroeconomics researchers sprayed

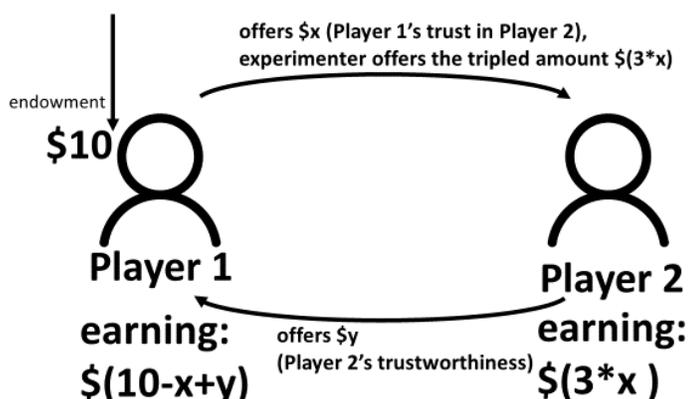


Figure 3. The Trust Game

neurotransmitter oxytocin into the noses of their participants who played as Player 1s and increased their levels of trust and generosity while playing the Trust Game (Kosfeld et al., 2005; Zak, Stanton, & Ahmadi, 2007). This is because when we trust in others, there is intense activity in the

septal area in our brain (Krueger et al., 2007). The septal area is rich in neurotransmitter oxytocin receptors, dampening fear and anxiety when we are in distress and thus motivating us to help others in need (Inagaki & Eisenberger, 2012). However, human trust in their social partners, according to neuroimaging evidence, is often biased towards in-groups, showing in-group favoritism. Intranasal oxytocin administration elevates the level of in-group trust through enhancing the capability of recognizing the facial emotion expressions of our social partners who share our own social identity (van IJzendoorn & Bakermans-Kranenburg, 2012). This finding of the relationship between oxytocin and trust to in-groups is congruent with the literature indicating that oxytocin promotes human ethnocentrism—people believing their own ethnic group or culture is superior to others. In an experiment, people with elevated oxytocin levels through intranasal administration associated more positive words to their own nationality than those in the placebo group in an Implicit Association Test (De Dreu, Greer, van Kleef, Shalvi, & Handgraaf, 2011).

In addition to implicit in-group favoritism, trust is subject to our evaluation of social partners' intentions. The evaluation of our social partners' intentions can be simply primed by semantic framing that subtly indicates friend or foe: participants sent significantly more money when their social partners in the Trust Game was described by the experimenter as “partner” than “opponent” (Burnham, McCabe, & Smith, 2000). The essential role of our evaluation of social partners' intentions in trust is also supported by neuroimaging evidence. Playing the Trust Game, the participants had increased brain activity in the anterior paracingulate cortex, the brain region associated with understanding others' intentions in social interaction, as well as taking the risk of believing that our social partners have benevolent intention and will reciprocate our trust (Krueger et al. 2007; Walter et al., 2004). When the Trust Game is repeatedly played, reciprocity expressed by one player strongly predicts future trust expressed by their partner—a behavioral response associated with the participants' neural responses in the dorsal striatum, a brain region that enables us to derive satisfaction and pleasure by trusting social partners based on the reputation developed by past behavior (King-Casas, Tomlin, Anen, Camerer, Quartz, Montague, 2005). Thus, to create trust in schools, it is important for school leaders to engineer the organizational structure and culture that promote reciprocity in social interactions in schools. Moreover, when participants played the Trust Game with humans and computers, the medial prefrontal cortex in the participants' brain (the brain region enabling us to understand our social partners' mental and emotional states) was more active when their partner was a human (social condition) than a computer (non-social condition; McCabe, Houser, Ryan, Smith, & Trouard, 2001). The differing brain activity patterns in social and non-social decision making lend further support that trust is subject to our evaluation of social partners' intentions.

Distrust, on the other hand, is *not* the opposite of trust (Dimoka, 2014). Instead, distrust is a distinct construct from trust, because distrust and trust activate two different brain mechanisms. Specifically, trust is associated with increased activity in the brain regions supporting social cognition (e.g., the anterior paracingulate cortex and medial prefrontal cortex), including predicting risks, as well as evaluating the social partners' credibility and benevolent intention (Krueger et al. 2007; McCabe et al., 2001; Walter et al., 2004). Trust is also associated with the activation of brain's reward system which is rich in dopamine; therefore, we derive gratification when we trust in others and when they reciprocate our trust (Dimoka, 2014; Krueger et al., 2007). By contrast, distrust is viewed as an emotion-laden construct, associated with the activation in the insular cortex and amygdala—the brain regions enable visceral negative emotions (e.g., anger and disgust) and fear for loss. To that end, distrust is laden with negative emotions, leading to behavioral responses to prevent ourselves from harm; whereas trust arises cognitively, entailing

people's intentional engagement in social interactions (Winston, Strange, O'Doherty, & Dolan, 2002). Put differently, distrust is not the opposite of trust: low distrust does not necessarily mean high trust; low trust does not necessarily mean high distrust.

Further, there is a gender difference in how people respond to distrust. Men respond to distrust with an increased level of dihydrotestosterone—a biologically active metabolite of testosterone associated with aggressive behaviors; in comparison, women reported that they disliked being distrusted, but there was no distinct physiological response or aggressive behavior (Zak, Borja, Matzner, & Kurzban, 2005).

Altruistic Punishment

A variant of the Trust Game can also be used to teach the construct of altruistic punishment in school leadership preparation programs. In one study, Player 1s were informed of Player 2s' action, and Player 1s were also given an option of whether they wanted to punish Player 2s who abused their trust and kept all the money (de Quervain et al., 2004). When our social partners are untrustworthy and abuse our trust, we interpret it as violating the social norm of cooperation and fairness. This norm violation evokes a strong desire in us to punish those defectors, even if the punishment incurs great cost on our end. Punishing violations of social norms activates the dorsal striatum, a brain region that is part of our brain's reward system, and we derive gratification from punishing those who violate the social norms. Such altruistic punishment, like the justice-motivated punishment in the Ultimatum Game, is essential to enforce social norms of cooperation in social interactions by deterring future violations (Boyd, Gintis, Bowles, & Richerson, 2003). School leaders are thus encouraged to identify and reflect on school policies and organizational behaviors that capitalize on altruistic punishment as a means to shaping positive school culture, promoting trust and cooperation, as well as deterring the violation of trust in schools.

You have a \$10 endowment. As a trustor, you can send all, some, or none of the \$10 to the other person (trustee).

For every dollar you send, the trustee will receive the tripled amount.

The trustee will then send all, some, or none of the tripled amount back to you.

Please use the bar to mark how much money you'd like to send to the trustee.

0 1 2 3 4 5 6 7 8 9 10

1



As a trustee, please indicate how much money you'd like to send back to the trustor.

The trustor sends you 90% of the endowment, and you receive \$27. How much (\$0-27) would you like to send back to the trustor?

The trustor sends you 80% of the endowment, and you receive \$24. How much (\$0-24) would you like to send back to the trustor?

The trustor sends you 70% of the endowment, and you receive \$21. How much (\$0-21) would you like to send back to the trustor?

...

The trustor sends you 10% of the endowment, and you receive \$3. How much (\$0-3) would you like to send back to the trustor?

Figure 4. A screenshot of using the Trust Game in decision-making instruction in a school leadership preparation program. It was set up on the author's university Qualtrics platform. The students fill out the survey in class on their laptops or smartphones via a weblink provided by the instructor. The instructor then uses the students' real-time results to introduce the constructs related to decision making, including trust, trustworthiness, risk taking, distrust, and altruistic punishment. The Public Goods Game

The Public Goods Game (see Figure 5) is used to study social decision making when group interest clashes with self-interest of each group member. It plays in large groups (e.g., four people or more). In a typical Public Goods Game, each group member is endowed with \$10. Group members *simultaneously* decide how to allocate their endowments between two “accounts”: one private and one public. The private account returns \$1 to the group members for each dollar allocated to that account; every dollar invested in the public account triples, and is then split *equally* among the four group members. Thus, group earnings are maximized at \$120 if everybody cooperates and contributes everything to the public account, in which case each of the four group members will earn \$30. However, individual rationality decrees that each group member has the private incentive to contribute nothing, thereby giving rise to the “tragedy of the commons” (Hardin, 1968). Like the in-group bias in the Ultimatum Game and the Trust Game, people also showed their in-group bias in the Public Goods game. Participants’ contribution to the public goods was significantly higher when they shared the social identity with other group members (Parks, Sanna, & Berel, 2001).

Additionally, the Public Goods Game allows school leaders to discover for themselves, and teach one another in the decision-making training about the competing interests between individuals and groups in social decision making. Some students’ decision making is more driven by the incentive to maximize individual interest, while others more readily focus on maximizing the group interest. In addition to teaching decision making when decision makers’ self-interest and group-interest are in tension, this game also demonstrates the importance of reciprocity and punishment to establish and maintain high levels of cooperation and altruism in organizations.

Reciprocity Is More Important Than Altruism in Driving Cooperation

Converging evidence in the Public Goods Game research indicates that reciprocity is more important than altruism in driving cooperation to maximize group interest. In the first round of the Public Goods Game, participants fall into two types by the percentage of endowment they contribute to their public accounts: (1) free-riders who contribute less than 30% of their endowment but reap the benefits from others’ contribution to the public goods, and (2) cooperators who altruistically contribute more than 30% to increase the public goods (Gunnthorsdottir, Houser, & McCabe, 2007). When the Public Goods Game is repeatedly played, participants tend to become reciprocators whose decision to cooperate is contingent on other group members’ contribution to the public goods (Kurzban & Houser, 2005). In another study using the Public Goods Game, when cooperators and free-riders are forced into the same group, the public goods diminish as the cooperators contribute less to the public goods, thanks to the limited reciprocity from the free-riders. However, when cooperators interact less often with the free-riders, the public goods diminish at a much slower rate and, in some cases, cooperators’ public contributions are sustained over repeated rounds in the Public Goods Game (Brekke, Hauge, Lind, & Nyborg, 2011; Gunnthorsdottir et al., 2007). Therefore, to promote and sustain cooperation in organizations, cooperators are recommended to be organized into the groups of similarly reciprocity-oriented individuals. The implication of these findings is to encourage school leaders to reflect on their leadership practices, as well as identify and develop the organizational structure and policies that facilitate reciprocity. If organizational citizenship behaviors—the helping behaviors towards colleagues, supervisors, and students (Podsakoff, MacKenzie, Paine, & Bacharach, 2000)—are considered as the altruism in organizational context, then the finding that positive reciprocity is more important than altruism in driving cooperation suggests that the organizational structure and

policies should be less about commanding people to sacrifice their self-interest in an enduring manner, but more about how to promote positive reciprocity in schools' social interactions.

Punishment as an Instrument to Foster Cooperation

Punishing free-riders, as the negative reciprocity, promotes cooperation as well. In the Public Goods Game, individual self-interest clashes with group interest. Usually, initial cooperation declines quickly in the Public Goods Game, leading to the “tragedy of the commons” as individuals' self-interest overrides group interest in social decision making (Kagel & Roth, 1995). However, when participants are allowed to punish free-riders (e.g., by investing \$1 to

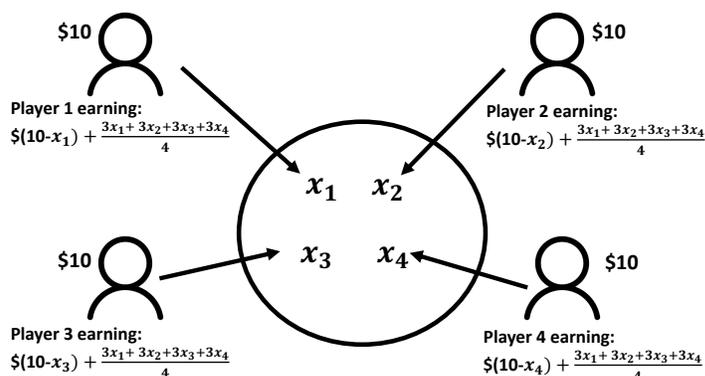


Figure 5. The Public Goods Game

You have a \$10 endowment, and need to decide how to allocate the \$10 endowment between two accounts: one private and one public.
 In your private account, every dollar you allocate earns \$1 return.
 In your public account, every dollar you allocate earns tripled amount of return, but will then be split equally among the group members.
 Your total earnings are the sum of your private and public accounts.

How much (\$0-10) would you allocate to your private account?

How much (\$0-10) would you allocate to your public account?

Total

Figure 6. A screenshot of using the Public Goods Game in decision-making instruction in a school leadership preparation program. It was set up on the author's university Qualtrics platform. The students fill out the survey in class on their laptops or smartphones via a weblink provided by the instructor. The instructor then uses the students' real-time results to calculate the public accounts of all students and announce the earnings for each student's public account.

Next, the instructor asks the students to record their own earnings by using the formula to calculate their earnings. Each student's earning = \$ in private account + \$ earned in group's public account = \$ in private account + $\frac{3 * \$ \text{ in all students' public accounts}}{\text{number of the students}}$. This game can be repeatedly played by asking students to allocate the amount of earning from the previous round. Over time, the pattern of altruistic punishment is expected to emerge in the group. The instructor can use the results to

introduce the constructs related to decision making, including in-group bias, reciprocity, altruism, and altruistic punishment. When the instructor reduces non-cooperator's earning by \$3), the free-riders are thus heavily punished and typically increase their contribution to the public goods in future rounds, leading to an increase in cooperation within groups (Fehr & Gächter, 2002). Punishment is also carried out to deter those who *might* violate the social norm of cooperation. Sometimes even the threat of punishment, not necessarily the actual punishment, can be used as deterrence for future norm violations. More importantly, as noted previously, driven by our justice motivation, we derive visceral gratification associated with activation of the dopaminergic reward system, when we punish norm violators, knowing that justice is served (Buckholtz et al., 2008). The more activation of the dopaminergic reward system, the greater cost people are willing to pay to punish (de Quervain et al., 2004). The gratification we gain from the pleasurable dopaminergic surge is particularly important when punishment is costly, as the self-righteous pleasure motivates us to bear the costs of altruistic punishment (Sapolsky, 2017).

Altruistic punishment is costly, especially in the early rounds of the Public Goods Game, when punishment is heavily used to establish the social norm of cooperation. In comparison, reputation formation is a less costly but powerful approach to foster cooperation (Rockenbach & Milinski, 2006). A good reputation is considered as the social rewards in the form of positive social feedback and social approval stemmed from social interactions. To punish free-riders, the group members withhold their social approval and praises, thereby preventing free-riders from forming a positive reputation. Although reputation forming is more cost-effective than altruistic punishment, reputation forming *cannot* substitute costly punishment. In the Public Goods Game, the experimenters sometimes promise rewards for those with a positive reputation of cooperating in the game, such rewards are considered as indirect reciprocity (Nowak & Sigmund, 2005). When given a choice of costly punishment plus indirect reciprocity vs. solely indirect reciprocity in the Public Goods Game, the participants prefer a combination of two. Rockenbach and Milinski (2006) thus concluded that it takes both costly punishment and reputation formation to boost organizational cooperation in social systems.

Another approach to punishment is social exclusion, such as marginalization, ostracism, and excommunication. When ostracism was designed into the Public Goods Game, cooperation increased significantly; more importantly, despite reductions in group size due to ostracism, the net earnings of the group increased (Maier-Rigaud, Martinsson, & Staffiero, 2010). This can be explained by the neuroimaging evidence suggesting that being socially excluded inflicts emotional pain in people by activating the same brain regions (e.g., the anterior cingulate cortex and right ventral prefrontal cortex) that are activated when we feel physical pain (Eisenberger, Lieberman, & Williams, 2003). Therefore, social exclusion derives its deterring force to induce cooperation through inflicting emotional pain in the “bad apples” (non-cooperators) and exclude them from the group.

To sum up, to boost cooperation in organizations such as schools, leaders can develop a three-pronged strategy: (1) reducing in-group bias by crafting a collective social identity, thereby easing the division of Us vs. Them in schools; (2) establishing the organizational norm of cooperation through promoting positive reciprocity; and (3) punishing free-riders who “drink” the water but do not “carry” it for the group. Using a combination of carrots and sticks, school leaders thus ease the tension between individual interest and group interest. Students in the school leadership preparation programs are thus encouraged to reflect on the current school policies and leadership practices that promote and inhibit the development of a collective social identity, reciprocity, and punishment in organizations, and provide recommendations accordingly.

Conclusion

This article demonstrates how to use three neuroeconomics games adapted from game theory—the Ultimatum Game, the Trust Game, and the Public Goods Game—in training school leaders’ decision making. Most of the decision-making training in school leadership preparation programs and professional development focuses on the value of shared, data-driven, and ethical decision making, rather than how a decision is made exactly (Wang, 2019b). The game-approach decision-making training introduced in this article serve as a proxy for school leaders to identify the blind spots and limitations of data-driven decision making. Participating in the decision-making games and understanding the neural mechanisms of decision making, school leaders could go beyond a behavioral perspective of decision making, reflect on their own decision making process and behaviors in social settings, and translate the constructs related to decision making (e.g., fairness, justice, inequity aversion, reciprocity, emotions, social identity, trust, distrust, and altruistic punishment) to leadership practices. Moreover, these neuroeconomics games could be paired by the cases published in *Journal of Cases in Educational Leadership* for further discussion to meets the PSEL standards (e.g., act ethically and professionally in personal conduct, and act with cultural competence and responsiveness in their interactions).

All three games—the Ultimatum Game, the Trust Game, and the Public Goods Game—advance our understanding of social decision making (van Damme et al., 2014). Building on data-driven decision making, the constructs—along with the compelling empirical evidence—introduced above provide the pedagogical tool for decision-making training in school leadership preparation programs. The Ultimatum Game demonstrates that in addition to self-interest, most people care about fairness and justice. When they are treated unfairly, fueled by anger and disgust, they are willing to punish the offender even at the cost of their own. When given an opportunity to express their negative emotions, they are more tolerant of unfairness. When they regulate their negative emotions, they are less likely to make impulsive decisions. When induced positive emotions such as empathy, they are more generous to their social partners. The Trust Game shows that social cognition-related trust and emotion-laden distrust are two distinct constructs, and carrying out altruistic punishment is one way to engineer trust in organizations. The Public Goods Game indicates positive reciprocity is more important than altruism in driving cooperation, and punishment is essential in establishing the social norm of cooperation. Moreover, all three games show that social decisions are context-dependent and social identity-contingent. School leaders, like all human beings, tend to have an implicit in-group bias; thus, how they make decisions in social settings is subject to whether they and their social partners share the same social identity.

These games are easy to set up to allow students to play in class, attesting to the saying “Everything should be made as simple as possible, but not simpler.” Yet such games are powerful in a way that enriches students’ understanding of social decision making. Instructors in school leadership preparation programs can invite students to play the games in class (see Figure 2, 4, and 6), use the real-time results to introduce the relevant constructs and psychological processes, followed by students’ reflection on their own leadership practices and provide recommendations accordingly in order to engineer better incentives as motivation and punishment as deterrence in organizations.

Finally, the neuroeconomics games introduced in this paper also have significant implications for researchers in educational leadership. Thanks to the social nature of leadership, most empirical studies in the field of educational leadership are either descriptive or quasi-

experimental. It is rare to find leadership studies that are experimental in a controlled environment. In fact, some organizational scholars have already called for pairing neuroeconomics games with neuroscience techniques to explore the underlying causes of the observed behavior in organizations (Volk & Köhler, 2012). Additionally, educational leadership researchers can advance the theory development in the field by building on a growing body of empirical findings in neuroeconomics. One critique in the field of educational leadership is the lack of cohesion in the field's theoretical groundings (Wang, 2018). Neuroeconomics research has already "left a large trove of neural evidence to be mined for insights" (Powell, 2011, p. 1491) in leadership and organizational science. To that end, educational leadership researchers can use empirical findings in neuroeconomics to test theories in educational leadership, and then eliminate inaccurate or ill-fitting theories or advance the theory development in the field.

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Candidate Chair Relationships and Socio-emotional Supports in Doctoral Education

This manuscript has been peer-reviewed, accepted, and endorsed by the International Council of Professors of Educational Leadership (ICPEL) as a significant contribution to the scholarship and practice of school administration and K-12 education.



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The purpose of this exploratory qualitative case study was to understand how dissertation chairs build relationships with doctoral students and provide socio-emotional supports in successful Ed.D. educational leadership programs. The sample for this study included 10 faculty at accredited colleges and universities. Combined, these faculty have successfully served on 714 dissertation committees (419 as chair) and have 160 years of experience. Findings are arranged by two research questions regarding chair-candidate relationships and candidate socialization and socio-emotional supports. These findings include practices that have the potential to improve attrition rates in educational leadership doctoral programs.

Keywords: doctoral dissertations, dissertation chair, doctoral attrition, graduation rate, educational leadership program, leadership faculty development, socio-emotional support, dissertation chair-candidate relationship

W. Edwards Deming is often credited with stating that every system is perfectly designed to get the results that it does. For doctoral education, the results for upwards of six decades have been a 50 percent attrition rate with 20-30 percent opting out at the dissertation phase (Lovitts, 2001; Terrell, Snyder, Dringus, & Maddrey, 2012). In addition to high attrition rates, the median number of years required to complete a doctoral program for education students is 6.3 years (National Science Foundation, 2018). While statistics in educational leadership programs are undocumented, it is likely that these rates are similar. This is particularly concerning when one considers the financial and emotional capital that doctoral candidates invest in programs. Researchers have examined student factors and the design of doctoral programs (e.g., DiPierro, 2011; McBrayer, Melton, Calhoun, Dunbar, & Tolman, 2018; Taylor, Vitale, Tapoler, & Whaley, 2018); however, little research has explored the dissertation chair perspective and what can be done to improve retention and completion rates. Therefore, the purpose of this exploratory qualitative case study was to understand best practices for chairing dissertations in Ed.D. Educational Leadership programs.

Literature Review

In a review of literature exploring doctoral retention and persistence, Rigler, Bowlin, Sweat, Watts, and Throne (2017) identified five constructs associated with improved outcomes for doctoral candidates. These constructs included (1) chair agency, (2) chair candidate relationships, (3) candidate socialization and support systems, (4) candidate preparedness, and (5) financial considerations. For the conceptual framework of this study, we focused on two of these constructs: Chair-candidate relationships, and candidate socialization and support systems. This study builds on previous research from this data set on chair agency, chair qualifications, and academic support.

Chair Candidate Relationships

The faculty advisor is one of the most important people doctoral students will interact with during their doctoral program and is particularly important due to the intense nature and duration of the dissertation process (Council of Graduate Schools, 1990; Nettles & Millet, 2006). While some may differentiate the responsibilities between a dissertation chair and doctoral advisor, for the purposes of this research, we are considering chair and advisor as the same as a dissertation chair may advise for the full time that a student is enrolled in a program. Unsurprisingly, a positive relationship between dissertation chair and doctoral candidate has been identified as one of the key factors associated with doctoral degree completion (Bitzer, 2011; Stallone, 2011; Storms, Prada, & Donahue, 2011). One reason that this may be true is that receiving substantive formative feedback continuously throughout the dissertation process can often be a harrowing experience for doctoral students. As such, the relationship between the chair and the candidate must be a healthy one that is built on trust. The trust between a dissertation chair and doctoral student is established through regular communication, constructive feedback, consistency, and personal connections with students (Holmes et al., 2014; Rademaker, Duffy, Wetzler, & Zaikina-Montgomery, 2016). Students must trust that the information being shared with them is accurate and is provided to facilitate their growth as independent researchers (Lee, 2008). When the student perceives that the chair is incompetent or disinterested, this will undoubtedly have a negative influence on the student's self-efficacy and willingness to continue to persevere through the program. Students need to be certain that their advisor has a compatible temperament, offers guidance suitable to their

needs, and is committed to their success (Fischer & Zigmond, 1998; Taylor, Vitale, Tapoler, & Whaley, 2018). Evidence of this commitment can be seen through a willingness to dedicate time, patience, and energy to supervise doctoral students. When chairs were unavailable due to other responsibilities, it had detrimental consequences for a student's ability to be successful (Holmes et al., 2014; Van de Schoot, Yerkes, Mouw, & Sonneveld, 2013). Research supports that educational leadership doctoral candidates are likely also to be working full time; therefore, it is also important to be flexible when arranging meeting times. Considering this, West, Gokalp, Peña, Fischer, and Gupton (2011) recommended that support must be provided for doctoral students electronically and in-person in order to meet their needs. The relationship that is built because of the dissertation process can be viewed as mentoring as the dissertation chair serves as the primary mentor in doctoral education (Sugimoto, 2012).

Pyhältö, Vekkaila, and Keskinen (2015) stated that mentoring was the second most important supervisory practice behind research assistance. Other researchers have suggested that effective mentoring is just as important at research and content expertise (Fountaine, 2012; Taylor et al., 2018). Fountaine (2012) and Taylor et al. (2018) also noted that few doctoral programs require (or provide) professional development opportunities for dissertation chairs to improve their mentoring skills. This training should include improving communication and rapport building skills (Holey & Caldwell, 2011; Moak & Walker, 2014).

Candidate Socialization and the Cohort Model

While the relationship between the chair and doctoral candidate is extremely important, Jairam and Kahl (2012) also identified academic friends as a form of social support. For this study, socialization is defined as positive relationships between students, and those relationships should be fostered. Socio-emotional supports help students successfully deal with stressors they might experience while in a doctoral program. The need for candidate socialization and support systems in doctoral programs exists due to the isolation, stress, doubt, and exhaustion that doctoral students experience (Ali & Kohun, 2007; Berman & Ames, 2015; Jairam & Kahl, 2011; Stubb, Pyhalto, & Lonka, 2011). The important nature that socioemotional well-being plays in the graduate process suggests that doctoral programs should increase support systems to increase student satisfaction and improve student attrition (Cockrell & Shelley, 2011). Without support, a student may experience social isolation as they progress through various stages of the doctoral process; pre-admission to enrollment, first year, second year through candidacy, and during the dissertation stage (Jairam & Kahl, 2018). Ali and Kohun (2007) also noted that social isolation and an unstructured format during the dissertation are major factors in doctoral student attrition. As such, structure and timelines have been identified as important components for supporting successful program completion (Taylor et al., 2018).

Research has suggested that the cohort model has the benefits of improved academic performance and increased interpersonal relationships (Barnett, Basom, Yerkes, & Norris, 2000; Dorn & Papalewis, 1997; Jackson & Kelley, 2002; Wesson, Holman, Holman, & Cox, 1996). In the area of academic performance, research suggests positive effects on academic learning and persistence (Hill, 1995; Lovitts, 2001; Norris & Banett, 1994). Meanwhile, interpersonal relationships are also increased as students are given the opportunity to integrate socially with their peers within a cohort. This may also occur when doctoral candidates begin to feel a sense of belonging and community as they construct new knowledge together (Tinto, 1997). This sense of community is important as students develop mutual interdependence, feelings of belonging, trust,

and dedication to the community (Rovai, 2002). However, when this does not occur, higher attrition rates are likely (Golde, 2005).

There are many reasons that researchers have suggested cohorts may be ineffective. Problems that have been reported in cohorts include: personal conflicts between cohort members; intimacy between members leading to marital problems; a few students dominating the group; and, cohort members colluding to support students who were not performing in group activities through coursework (Barnett et al., 2000; Wesson et al., 1996). Another concern regarding cohorts identified by West et al. (2011) was that coursework and the dissertation are two distinct stages of most doctoral programs with coursework being structured and the dissertation being unstructured. Based on this observation, de Valero (2001) recommended that a connection between coursework and the skills needed to complete the dissertation be strengthened to facilitate this transition.

Research Questions

This exploratory qualitative case study research was guided by one overarching research question and two sub-questions. The overarching research question was: What are best practices for chairing educational leadership dissertations in Ed.D. programs in the United States? Sub-questions included:

1. What are the best practices of educational leadership faculty for developing chair candidate relationships?
2. What are the best practices of educational leadership faculty for supporting candidate socialization and socio-emotional supports?

Methodology

The methodology chosen for this study was qualitative, as the purpose of this study was to collect narrative data from a distinct set of faculty who teach in educational leadership Ed.D. programs throughout the United States. Moreover, the design for this study was an exploratory multiple case study. As Yin (2014) described, the exploratory case study is used when there is no pre-determined outcome. The author further stated, case studies are appropriate when asking “how,” “why,” “what,” and “who” questions.

While the main study was designed as a multiple case study, where a variety of data sets were collected from each participant (Yin, 2003), the focus of this manuscript is findings across 10 cases that deal specifically with chair-candidate relationships, and candidate socialization and support systems collected vis-à-vis open-ended interviews conducted in a natural setting. As is the nature of qualitative studies, the researchers’ intent was to explore the meaning participants hold relative to their work chairing dissertations (Creswell & Creswell, 2018). In addition, the researchers did not want to be constrained by predetermined categories often used in quantitative studies (Patton, 2002).

Sample and Sampling

In order to best answer the research questions of the study, participants in a qualitative study must be purposefully selected based on their knowledge and understanding of the issue at hand (Creswell & Creswell, 2018; Patton, 2002). Selection criteria for participants included the following: Working in an accredited U.S. university; holding a position as a tenure-track faculty

member in an educational leadership Ed.D. program; and having served as chair (aka, major professor) of a minimum of 10 dissertation committees. The researchers generated a list of 24 individuals; emails inviting participation in the study or asking individuals to identify other faculty members who might be willing to participate in the study were sent to each of the 24. Responses resulted in the identification of 12 individuals willing to participate in the study; however, two were eliminated due to lack of availability during the timeframe of the study. The final sample consisted of 10 tenure-track faculty members.

Instrumentation

Data collection in an exploratory case study relies on the researchers as the key instruments of the study, as they are the ones who prepare the protocol, and collect and analyze data (Creswell & Creswell, 2018; Patton, 2002). Therefore, care needed to be taken to ensure biases were kept in check throughout the study. As the researchers were unable to locate an instrument that addressed the purposes of this study, they created a 21-question structured interview protocol. In order to keep questions free from bias, all interview questions were derived from the literature and aligned with each of the research questions (Creswell & Creswell, 2018). In addition, demographic questions were added.

Trustworthiness and Credibility

As the researchers served as the key instrument in this study, as is typical of qualitative designs (Patton, 2002), care had to be taken to ensure findings were actually those found in the data and not a mere representation of the researchers' values and biases (Creswell & Creswell, 2018). To ensure that biases were kept in check during data analysis, researchers engaged in reflexivity through the questioning and memo-ing of self as data were examined.

Throughout data collection, the researchers attended to the three principles of data collection used "to ensure quality control" in case studies as recommended by Yin (2003, p.106). Interviews, archival data (CVs, descriptions of programs of study, workshop schedules) and field notes framed the multiple sources of data. Triangulation of data was achieved through investigator triangulation (Yin, 2003). Denzin (2012) defined investigator triangulation as inquiry involving multiple researchers. Specific to this study, the researchers used interrater reliability in order to provide consistent estimates of the same behaviors.

Data Collection

Once institutional permissions were secured, and the 10 participants identified, the informed consent form was sent via email to each individual with a request to sign and return the form. Additionally, the email included the request for an appointment time of one hour to conduct the interview. Each interview was audio-recorded with the researcher conducting the interview making field notes. Probing and clarifying questions were used as needed. Audio files were sent to third-party transcription service; although no identifiers were captured on audio files and pseudonyms were assigned to participants, the transcription service makes available a third-party confidentiality agreement. Once transcriptions were returned, the researchers checked each transcript against the recording to ensure accuracy; few changes were needed.

Data Analysis

In qualitative research, data analysis is an inductive process in which the researchers work back and forth, generating patterns and categories until themes that come across all data can be established (Creswell & Creswell, 2018). A preliminary coding list was generated from the literature review, as recommended by Patton (2002); software for analyzing qualitative data (*Dedoose*TM) was used and the predetermined codes were incorporated into the software in order to begin analysis. Emergent codes were added as they arose. In an effort to ensure accuracy of findings, the researchers sought to establish interrater reliability (Richards, 2015). In order to do so, they selected data from two participants; each researcher coded data individually and then all met virtually to compare results. Interrater reliability was high; areas of differences were discussed until agreement could be reached before moving forward.

Once data were coded, like items were grouped in order to reduce data into manageable chunks (Marshall & Rossman, 2006). Categories of meaning emerged as patterns and themes emerged from the data (Patton, 2002). As the researchers began to make sense of their findings, they began to search for interpretations and explanations in order to reach conclusions and answer the research questions (Patton, 2002).

Findings

The following presents the findings gleaned from data collected for the purposes of research regarding best practices for chairing educational leadership dissertations in Ed.D. programs in the United States. Findings are presented in accordance with the two research sub-questions that guided the study. Emergent themes are substantiated with direct quotes provided by the participants in this study.

Chair Candidate Relationships

An examination of chair candidate relationships revealed two primary themes: reciprocal trust and communication. Reciprocal trust was developed as a result of having an active role in the admissions process and the teaching of coursework. During these interactions, faculty and students were able to develop a trusting relationship; the communication that occurred between faculty and doctoral candidates during the dissertation process solidified these previously established relationships. When trust and open communication were present, a mutual commitment to student success evolved. This is an essential part of the authentic relationship that is formed between the dissertation chair and student.

For participants in this study, the relationship between faculty and doctoral students began at admissions. When faculty members are involved in admitting a student, they are more likely to take ownership of the student's success to completion. Faculty D stated:

I'm admitting you because I think you can be successful, and I'm willing to put in the effort it is going to take to ensure that you are successful. I think if somebody else admits a student, then you don't have that investment in that individual.

Along the same vein, Faculty J noted:

The dissertation is a written product, and a student is not going to be successful unless they could write at the level of expectations that we have for doctoral study. And so, if we admit

students that don't have those skills, then we can't be surprised when they're not successful. I fought many institutions for not doing that in this current environment.

Faculty J discussed an ever-emerging environment where programs were focused on generating revenue by meeting admissions quotas rather than focusing on the potential of students to be successful. This was also articulated by Faculty D, who stated, "When you are forced to admit a minimum number, you don't necessarily have the *cream de la cream* of student." Because of the need to ensure students had a reasonable ability to succeed in a doctoral program, all 10 respondents discussed the importance of being involved in the admissions process. As Faculty D added, "I think it should be the role of the faculty who are going to teach this student and who are going to be on their committees." Faculty F shared the sentiment, stating, "Since faculty [who] teach in the program know the expectations of the program, then they would be the best to review those application materials." The initial connection formed at admissions is further developed during coursework.

All 10 faculty discussed the importance of full-time faculty teaching coursework to ensure that students were academically prepared to conduct research and complete the dissertation. They also discussed that courses they taught were the primary area where they were able to get to know the students and the students were able to get to know them. From this, they were able to identify those students with whom they felt there was a match between their personality and research interests. Faculty A asserted, "I can have those transparent conversations with them because I have the relationship. Knowing some students as they progress, I can say to them, 'I don't think I'm a great fit for your dissertation. I think you'd be great with another person who has a specific expertise or personality fit.'" In addition, Faculty C noted, "We are firm that doctoral courses need to be taught by full-time faculty." The reason provided for this was so that high quality of doctoral-level instruction could be maintained, and faculty and students could develop relationships.

In some cases, faculty pointed out that adjuncts teaching doctoral-level courses were a problem because that provided fewer opportunities for full-time faculty who were chairing dissertations to work with the students prior to the dissertation process. Faculty E revealed that, "[Students in our program] don't have a lot of experience with a lot of full time the faculty, but they get a lot of experience with adjuncts. I think that is probably a mistake that we make in our university." This could be considered a mistake because the interactions within the course were perceived as essential to developing chair-candidate relationships. For example, Faculty F explained, "I think that the relationships with faculty and the cohort that was developed and the teams that were formed were the major factors in the high retention that we had." This was also discussed by other interviewees. Faculty A noted, "I think that helps build that relationship and trust with them and the patience necessary when they don't like the fact that this is unlike anything they've ever experienced." Faculty D stated, "I think that every full-time tenured faculty member should teach at least one dissertation course." In addition to coursework, programs created other opportunities for faculty and students to interact and develop rapport. While additional structured activities varied by program, such activities included a BBQ, group meetings with faculty such as *meet and greets*, Friday night dinners, a two-week summer workshop, Saturday seminars, and summer research institutes.

Meaningful one-on-one interactions with individual students during the dissertation phase were also considered to be important in developing chair-candidate relationships by nine of the faculty members. During these meetings, faculty would take the opportunity to become better acquainted with the dissertation candidate through personal conversations. For example, Faculty B shared, "I made personal connections through sharing my own personal experiences. Getting to

know students on a personal level helps when giving feedback. They seem to take [critical feedback] better.” By engaging in meaningful interactions, faculty were better able to understand the needs of the students and were able to develop a trusting relationship. There was only one instance where the faculty member did not actively seek to build personal relationships. In this case, the faculty member said the relationship is about the work. As Faculty C explained, “Quite frankly I think that the relationships are about the work...we should be leaders enough to know that we are developing them academically and intellectually and professionally. It's not social.”

The second theme to emerge relative to chair candidate relationships was effective communication. This theme was broken down into three categories; mode of communication, frequency, and ethic of care.

Mode of communication. One important finding that emerged from the study was that faculty members use a variety of methods to communicate with students. As working professionals who often had families, meeting face-to-face often presented a challenge for doctoral students. As such, in addition to traditional face-to-face communication and written communication such as feedback on written work, faculty utilized a variety of technological resources to overcome the challenges of time and place which effected these working professionals. All 10 participants utilize digital communication including social media (e.g., Facebook), virtual meetings (e.g., Slack, Google Hangouts, WebEx, Skype, and/or Zoom), and weekly text reminders that were scheduled to keep the students on task and progressing. Faculty I stated:

I am on Skype every week with somebody around the world usually early in the morning because it's late at night for them. For my on-campus students I structure stuff once a semester where we meet at a coffee shop or in my office.

Faculty J noted, “I require a weekly Skype conference” and Faculty H indicated, “I try to see them face-to-face or via *Zoom* and I usually initiate those because they are busy.”

This digital communication was in addition to face-to-face and written communication that also occurred. The written communication included notes and editing (n=10) and rubrics (n=3) for communicating expectations. While the academic benefits of these digital meetings were evident, these meetings had social implications as well. By being flexible and working around students' schedules, faculty were demonstrating that they were invested in the success of the students.

Frequency and turnaround time. A second category that emerged from the data was frequency and turnaround time in which students received feedback. These constructs were grouped together because they both related to time.

One of the main points that was highlighted by all faculty was the importance of meeting with students during the dissertation phase. The frequency of meetings came up in each of the conversations and it was noted that meetings were held more often at the beginning of the research process; this ranged from weekly (n=6) to monthly (n=4). During the dissertation phase faculty intentionally met with students early on and then gradually released responsibility to the students. It was clear that continuous academic engagement was seen as critical. While students had much more autonomy as they progressed through the dissertation phase, formal meetings were still held. Faculty H indicated, “I think it's helpful to be in touch very frequently so they know that I have not forgotten about them.” As Faculty J explained:

The students I need to meet with most frequently are less likely to meet and the students I need to meet with the least are in my office every other day, but that is not totally unexpected. Therefore, I found it necessary to just set up a stage for it. And I require a weekly check in to ensure that we have continuing conversation.

By meeting frequently and initiating these meetings, faculty were ensuring that students maintained momentum and developed the habits of the scholar. Meetings also served to keep communication channels open between the dissertation chair and student, and demonstrated to the student that the dissertation chair was committed to his or her success.

Another way that faculty demonstrated this commitment to student success was through the quick turnaround times for providing feedback. All of the faculty members provide feedback in a timely manner: 24 hours (n=2), one week (n=2), or two weeks (n=6). From a pragmatic approach this allows students to work continuously. However, it also has an additional effect of building chair-student relationships by showing their students through action that the faculty member cares about them and their work by prioritizing it.

Ethic of care. The third emergent category was ethic of care. In addition to discussions about the research, some of this communication was geared toward building a positive relationship between the student and the dissertation chair. An example of this can be seen in these statements from Faculty H:

I communicate frequently. I'm regularly in touch with them. I'm not one of those advisers that sits back and waits for them to come to me. I am a proactive communicator, so they usually hear from me two or three times in a semester at the minimum. Just checking in [to] see how they're doing. I take extensive notes at that very first meeting about them, their background, their family, their interest, and I then try to sort of connect to those later. How are your kids? Where do you want to go on vacation? How was their break? All those informal things that I think help bond people together.

By engaging in authentic discussions about student's personal lives in addition to their academic goals, dissertation chairs in this study demonstrated an ethic of care. This personal understanding helped the faculty members contextualize and promote the emotional well-being of the students. In addition, it helped the faculty member assess when students were struggling in order to provide needed supports.

Candidate Socialization and Socio-Emotional Supports

An examination of candidate socialization and socioemotional supports revealed two primary themes: cohort model and faculty support. The primary categories under the cohort model were student-student relationships and cohort continuance. Faculty support included the importance of understanding stressors and providing encouragement.

Cohort model. All 10 programs utilized the cohort model to help students develop relationships with other colleagues who were going through the program. By engaging students in a cohort, students could develop a communication network that organically evolved. Evidence of this network could be seen through back-channel text messages, Facebook pages, and lunch between classes. As Faculty G offered, "They use Slack or Google Hangout or Google Drive. There is a lot of collaboration, and we enforce that in our classes, for them to come up with systems that work for them." In some programs, efforts were intentionally taken to provide structured interactions within coursework so that students got to know themselves and each other. For example, Faculty I discussed using digital storytelling to help students better understand themselves and each other.

We purposefully designed some deep work with self and it helps socialize themselves to each other and to this program. This work lets them know that we're attuned to you as a person, not just to the process of getting through. If you just put a cohort together doesn't

mean it's going to be successful. You have to create structures in which they're going to have authentic and meaningful engagement with each other.

Faculty H also discussed the importance of students interacting. "I do a lot of things that require and give this opportunity to interact with each other and learn about each other."

Discussions also emerged about the importance of forcing students to work with others across the cohort and not just in a small group. Faculty C explained, "I mix up the room and don't let them sit in a little clique." Faculty F noted, "We purposely built specific activities in to courses to build the cohort." This faculty member described breaking students into teams within the cohort and then creating interactions across teams. "Every team that was formed within the cohort while I was there always said at the end, 'these are now my best friends and they will be in my life forever.' They had really bonded in their team." However, this faculty member also noted that they intentionally designed work within the cohort so that these teams did not neglect other members of the cohort:

We had team assignments but what we found is they were becoming too focused on their team development and team projects. They really were beginning to neglect the other people in the cohort. So, we had to purposely design some projects where we wanted to mix up the groups.

While relationships were built and maintained during coursework, only one program provided a formalized structure during the dissertation.

Cohort Continuance

In one instance, relationships developed during coursework were maintained after coursework through group research meetings and workshops. The other nine faculty noted that the cohort did not explicitly provide support after the completion of coursework. Faculty A stated, "I think during the coursework part, I think it helps immensely in terms of just that support and encouragement. I think things sort of dwindle once they get to the dissertation phase because they're all going out on their own." When discussing the program design for maintaining cohort relationships, Faculty E noted, "There really isn't much other than what I try to do individually."

In some cases, faculty shared that they should do more in this area. As Faculty H pondered: I've always wondered if there would be any value in bringing folks back together after they started. Where you could interact across the cohort and see what they're struggling with, how they're approaching things, and who needs support. Right now, we're not doing that and that might be an easy way to extend our Saturday seminar idea a little farther.

As oftentimes formalized structures were lacking, emotional support during the dissertation phase was largely a function of the relationship between the dissertation chair and the doctoral student.

Faculty Support

These faculty participants had identified that providing emotional support is an area where more could be done especially after coursework was complete. As previously discussed, they stated that they provided emotional support as it related to the dissertation process itself when they noticed a student was struggling. Faculty A indicated, "I think we have to do a better job, all of us, in terms of emotional well-being and support along the way to really encourage them." Given that these are often working professionals, the faculty noted that students would often not ask for assistance. Faculty H stated,

So one of the joys of working as administrator is that they don't show vulnerability very often unless they are super stressed. They feel like they have to put on the face that they can handle it. I try to reach out and touch base on the folks often to see how things are going. When they express stress or anxiety we try to work through and figure out a way to juggle all the things they're juggling and get them through successfully.

The sentiment that they were available to help the students cope with the variety of stressors that they experience within the doctoral program was shared by all of the faculty.

As the dissertation chair, participants believed they were left to their own resources to help students navigate through these difficult times. Frequently this took the form of positive encouragement and empathy. As stated by Faculty H, "I try to really celebrate a lot of really small wins which add up. I think that helps keep them upbeat and motivated." From an institutional perspective, the students were largely left to their own means to deal with socio-emotional supports, other than their interactions with faculty.

Discussion

As the purpose of this study was to investigate best practices for chairing educational leadership dissertations in Ed.D. programs in the United States in the areas of developing chair candidate relationships and providing candidate socialization and socio-emotional supports, findings as they relate to each of those areas will be discussed in relation to the current literature.

Chair Candidate Relationships

This examination of chair candidate relationships revealed two primary themes: reciprocal trust and communication. By being involved in all aspects of the program, including the admissions process, teaching coursework, and during the dissertation phase, faculty were able to develop authentic relationships with their doctoral students. These relationships provided a foundation of reciprocal trust which helped students identify a dissertation chair who had a compatible temperament, offered guidance suitable to their needs, and was committed to their success as recommended by Fischer and Zigmond (1998) and by Taylor et al. (2018). In addition, consistent communication during the dissertation process solidified these relationships and further entrenched the chair faculty relationships.

West et al. (2011) asserted that support must be provided for doctoral students electronically and in-person to meet the needs of students. The findings of this study were consistent with this recommendation, as faculty provided support to students even when time and distance presented challenges by being flexible and utilizing technological resources in addition to traditional methods of communication.

For the educational leadership students and faculty, time is a precious commodity that is limited due to the wide variety of activities in which each of them is engaged. By initiating meetings with students frequently, and prioritizing their work and providing feedback in as little as 24 hours, the faculty were able to help their students successfully complete their dissertations. This supports the findings by Holmes et al. (2014) and Van de Schoot, Yerkes, Mouw, and Sonneveld (2013) that suggested that dissertation chairs being unavailable due to other responsibilities had detrimental consequences to a student's ability to be successful.

By engaging in frequent, personal and professional communication utilizing all available modes of communication, these successful dissertation chairs have shown an ethic of care and have developed strong chair-student relationships. These relationships contribute to the success

they have had in their roles as educational leadership faculty, which ultimately led to reduced attrition rates in their programs. This finding supports research conducted by Holmes et al. (2014) and Rademaker et al. (2016), which suggested that the trust between a dissertation chair and doctoral student is established through regular communication, constructive feedback, consistency, and personal connections with students.

Candidate Socialization and Socio-Emotional Supports

Many researchers have identified the need for candidate socialization and support systems in doctoral programs due to the isolation, stress, doubt, and exhaustion that students experience (e.g., Ali & Kohun, 2007; Berman & Ames, 2015; Jairam & Kahl, 2011; Stubb, Pyhalto, & Lonka, 2011). Many of the concerns regarding candidate socialization were formally addressed by the programs in the study by utilizing a cohort model. Admissions were routine and students were enrolled together and progressed together. Students were not admitted off-cycle, therefore, avoiding the risks of undermining the purpose of utilizing a cohort.

Within coursework, the faculty in this study provided students with opportunities to interact with each other and build a sense of community as recommended by Tinto (1997) and Rovai (2002). In addition, one program focused on the development of the understanding of self and three faculty mentioned mixing up students during coursework so that cliques did not form. This aligned with previous research suggesting the cohort model can increase interpersonal relationships (e.g., Barnett et al., 2000; Dorn & Papalewis, 1997; Jackson & Kelley, 2002; Wesson et al., 1996).

However, nine of the programs did not have a formalized process for maintaining the social structure when coursework ended. In other words, when students need support the most, they are receiving the least support from their peers. Jairam and Kahl (2018) and Ali and Kohun (2007) noted that social isolation and an unstructured format during the dissertation are major factors in doctoral attrition. Because formal supports did not exist, it appears that the dissertation chairs were the sole provider of emotional support during the dissertation phase within the program. This support often took the form of encouragement and empathy and was focused on the completion of the dissertation. From a mental health perspective, faculty largely left students to their own means to deal with socio-emotional well-being due to the students being working adults.

Recommendations for Programs

The important nature that socioemotional well-being plays in the graduate process suggests that doctoral programs should increase support systems to increase student satisfaction and improve student retention and graduation (Cockrell & Shelley, 2011). One of the key elements to the success of the programs in this study was that there was continuous relationship-building from the beginning to the end of the program. Faculty were involved from admissions to the dissertation completion. When this occurred, there was a mutual commitment to student success and reciprocal trust between the faculty and students. Therefore, the following four recommendations apply to programs.

Faculty should have a central role in admissions decisions so that they have a stake in the success of the students they admit. As substantiated by participants of this study when faculty members are involved in admitting a student, they are more likely to take ownership of the student's success to completion and graduation.

Second, adjunct faculty should be used sparingly (or not at all) in doctoral coursework as they may lack the requisite knowledge to teach skills necessary to complete a dissertation and may view teaching a course in isolation rather than as part of a coherent process to developing the students toward completing a dissertation. While adjunct faculty are vital to educational leadership programs as they bring current and relevant experiential knowledge and experiences to the classroom, few programs permit adjunct faculty to chair dissertations.

Third, full-time faculty should teach coursework. This has a dual benefit of allowing the faculty and students to develop trust before getting to the difficult dissertation stage. In addition, it provides opportunities for faculty to see where students may be lacking specific skills at the dissertation phase and allows them to modify coursework to address those weaknesses within the program.

Finally, programs should strategically provide opportunities for the relationships that were built during coursework to continue during the dissertation phase. The cohort structure can be maintained by having routine meetings similar to traditional courses where students can meet with their chair and other students. This could take the form of writing workshops or writing days. This serves the dual purpose of keeping students on a timeline, creating formalized due dates for work (creating urgency), improving student-faculty relationships, and providing necessary peer support and encouragement.

Recommendations for Faculty

In addition to the program recommendations provided, the researchers offer several recommendations for faculty. As faculty work at the frontline where education takes place, they have a key role in ensuring the success of doctoral students. Therefore, the following two recommendations apply to faculty.

First, faculty members need to recognize that there is a social-emotional component of student success. Even though doctoral students are adults, they experience fear and self-doubt while engaged in the dissertation process since this is significantly different than the traditional coursework to which they have become accustomed. For this reason, it is incumbent on faculty to build trust with students within coursework and during the dissertation phase. This is especially true considering the power dynamic that exists between a chair and student. When trust is established, students are more receptive to critical feedback and are more willing to share the issues they may be experiencing academically and emotionally. Trust is developed through regular communication, constructive feedback, consistency, and personal connections with students.

Next, faculty should make a commitment to student success. This includes being available, holding the student accountable for productivity during the dissertation phase, actively contacting students and providing structure during the dissertation phase, and being flexible to meet with students in a way that best meets their personal needs. This may include meeting face-to-face, meeting through technology, and communicating in writing. This commitment to student success should include taking the initiative to meet with students and review progress at least monthly instead of passively waiting for students to initiate contact when they are ready or when they need help. Left on their own, weaker students or students who lack self-efficacy are unlikely to ask for support.

The traditional scholar in isolation model has led to high attrition rates in doctoral programs for decades. It is time for educational leadership programs and faculty to explore new ways to ensure student success. Providing opportunities for chair candidate relationships to develop and

providing opportunities for candidate socialization between students are two areas where this process of reducing attrition can occur.

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Appendix B

Table 1

Demographics of Educational Leadership Faculty

Faculty	Gender	State	Experience as Faculty Member	Type of Institution / Carnegie classification	Total number of completed dissertations as chair	Number of completed dissertations as a committee member
A	Male	Florida	12 years	Doctoral: Professional Universities	7	15
B	Male	Florida	9 years	Master's College & University: Small Program	14	11
C	Female	Florida	19 years	Doctoral Universities: Highest Research Activity	101	51
D	Female	Georgia	15 years	Doctoral Universities: Moderate Research Activity	77	45
E	Male	New York	6 years	Doctoral Universities: Moderate Research Activity	44	58
F	Female	North Carolina	14 years	Baccalaureate Colleges: Diverse Fields	65	20
G	Male	Kentucky	11 years	Doctoral Universities: Highest Research Activity Supplementary	3	15
H	Male	Colorado	20 years	Doctoral Universities: Higher Research Activity	23	40
I	Male	North Carolina	14 years	Doctoral Universities: Higher Research Activity	45	20
J	Male	Georgia	40 years	Doctoral Universities: Moderate Research Activity	40	20
Total			160 years		419	295

Appendix C

Table 2
Publications of Educational Leadership Faculty

Faculty	Books	Book Chapters	Peer Reviewed articles	Editorially reviewed articles	Total Publications
A	2	3	11	11	27
B	0	3	12	3	18
C	9	5	31	24	69
D	0	2	11	4	17
E	0	0	2	0	2
F	0	3	20	1	24
G	0	12	48	7	67
H	3	12	26	88	129
I	6	14	38	15	73
J	7	7	20	26	60
Total:	27	61	219	179	486