Signature Pedagogy: Using Equity Audits to Identify Complex Problems of Practice

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Abstract

This study aimed to understand the impact of a signature pedagogy used in a doctoral educational leadership program. In this study, an equity audit was used as a tool for doctoral students to identify areas associated with equality, ethics, or social justice. The researcher examined 39 doctoral students' equity audits through a content analysis lens to identify common themes. The inquiry leads doctoral students to identify inequitable areas in their school district and create action steps to address them. Furthermore, using the equity audit to examine school districts has started the process for doctoral students to identify a complex problem of practice in the field.

Keywords: problem of practice, signature pedagogy, equity audits, dissertation in practice

1. Introduction

Across the nation, there are calls to reform educational leadership preparation in a drastic manner. Our educational leadership program has taken the initiative to respondto school districts' demands by transforming our educational leadership Ed.D. program. A foundational piece of changing our Ed.D. program was to rethink how educational leaders prepare in today's school context. Reforming executive leadership training means rethinking the entire educational process.

Our Ed.D. program's focus was to align with the Carnegie Project for the Education Doctorate (CPED) vision, mission, and framework. Our faculty also wanted to make sure we aligned the six principles of the CPED program and the program design concepts. Our program redesign integrated all the design concepts, ultimately leading to the dissertation in practice (DiP) model.

The purpose of using the DiP framework was to create a culminating experience for doctoral students to discover a complex problem of practice, study the effects, and take the initiative to implement change in PreK-12 school settings. Consequently, students expect to complete action research projects applied to their local school and community context. By taking measures to transform our Ed.D. program into a dissertation in practice DIP framework, faculty members had to enhance their curriculum and pedagogy.

This study specifically focuses on the CPED design concept: signature pedagogy. As defined on the CPED website, signature pedagogy

"is the pervasive set of practices used to prepare scholarly practitioners [to think, to perform, and to act with integrity] (Schulman, 2005, p. 52). It challenges assumptions, engages in action, and requires ongoing assessment and accountability."

Signature pedagogy is one of the eight design concepts of the CPED framework. This study focuses on using equity audits as the signature pedagogy that drives doctoral students to identify any inequities, draw a conclusion on any ethical dilemmas, and draw conclusions on social justice issues.

2.1 Dissertation in Practice (DiP)

Dissertations in practice have resurfaced in education leadership programs around the turn of the century. Archbald (2010) argued that dissertations in practice need to address complex practice problems or focus on practice problems daily. Specifically, Archbald (2010) poses two questions that drive the core value of a DiP. The two questions are: "What's the problem? What should we do about it?" (p. 714). For research aimed at identifying and solving problems into effective practice and for practitioners to make a difference in a school setting, the research needs to take the role as an inside-researcher and conduct action research (Herr & Anderson, 2015; Butin, 2010; Mintrop, 2016). Action research tends to solve the problem of practice and create more in-depth knowledge as the investigation unfolds (Coghlan & Brannick,2014).
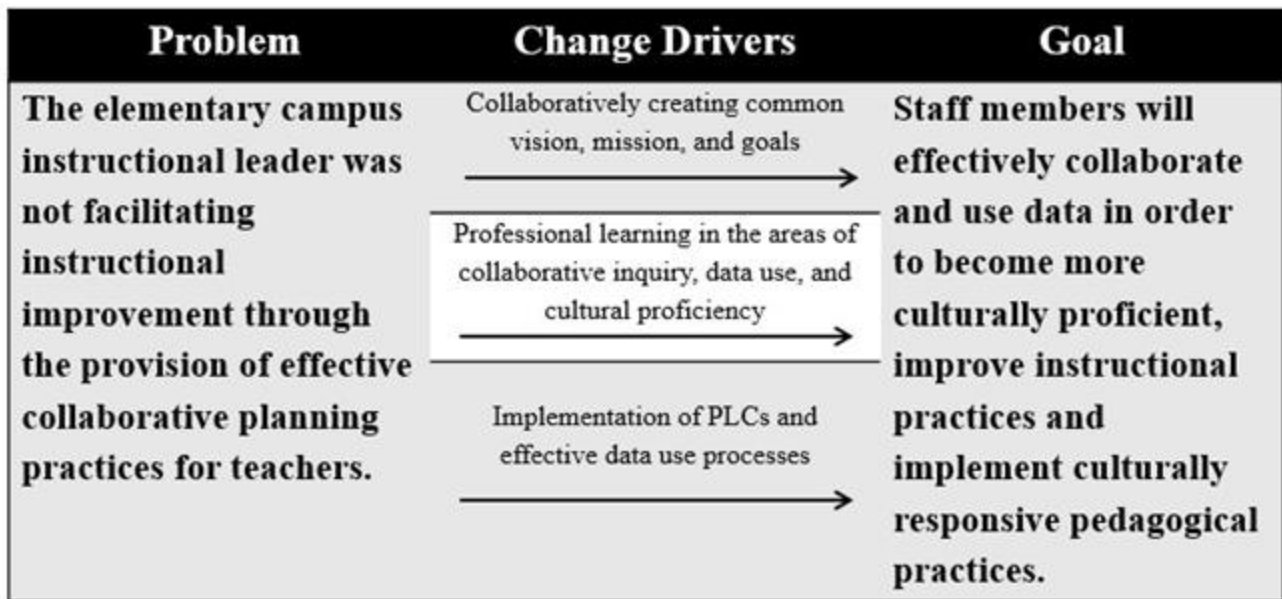
Through the process of action research, the change will naturally occur (Fullan, 2011), allowing the researcher to continually evaluate the cyclical process of diagnosing the problem, plan and problem-solving (Mintrop, 2016).

Mintrop's (2016) design-based model of action research design includes three phases. Phase One: Intervention Design, Phase Two: Pilot Implementation, and Phase Three: Evaluation and Impact Analysis. Within the tri-phase structure, Mintrop (2016) uses a change driver process to support the outcome or also known as the goal. Change drivers are the levers that can make things happen within an organization (Mintrop, 2016). Figure 1 is an example of a change driver process's visual representation within a dissertation of practice.

Figure 1 illustrates that when cultural proficiency and instructional practices improve, participants in the dissertation study will need to "effectively implement collaborative inquiry and data use processes" (Parker, 2010, p. 11). Doctoral students can use several resources and tools to identify problems of practice in their school setting. One tool that can be used to identify inequities in schools is called the equity audit.

Figure 1

Example of Change Driver Diagram within a Dissertation in Practice

Problem	Change Drivers	Goal
The elementary campus instructional leader was not facilitating instructional improvement through the provision of effective collaborative planning practices for teachers.	Collaboratively creating common vision, mission, and goals → Professional learning in the areas of collaborative inquiry, data use, and cultural proficiency → Implementation of PLCs and effective data use processes →	Staff members will effectively collaborate and use data in order to become more culturally proficient, improve instructional practices and implement culturally responsive pedagogical practices.

Note. Adapted from Parker, J. M. (2020). Improving teaching and learning: A case study of a rural Texas elementary school's implementation of professional learning communities and culturally responsive pedagogical practices

2.2 Equity Audits

Equity audits have surfaced in research over the past 20 years, yet there still seems to be limited research on how educational leaders use them. Skrla, Scheurich, Garcia, and Nolly (2004) "simplified reconceptualization of the equity audits" (p. 133) and focus on three areas, including teacher quality, educational programs, and student achievement. Skrla et al. (2004) found that teacher quality plus programmatic equity equals achievement equity. Their reconceptualization of the equity audit is illustrated in Table 1.

Table 1

Reconceptualization of the Equity Audit

Teacher Quality	Programmatic Equity	Achievement Equity
Teacher education	Special Education	State Test Results
Teacher experience	Gifted and Talented	Dropout Rates
Teacher mobility rate	(GT)	H.S. Drop-out Rates
Teacher Certification	Bilingual Education	Graduation Tracks
	Student Discipline	ACT/SAT Results

Note: The information provided in Table 1 is a depiction of Skrla, Scheurich, Garcia, and Nolly (2004) reconceptualization of equity audits.

Skrla et al. (2004) found that equity audits present inequities in all three components listed in Table 1 above. Skrla and colleagues describe inequities as a 10% point plus or minus the difference in comparing two quantitative variables. For example, suppose one campus demographics reveal males being in the gifted and talented program at 20%, and the females comprise 60% of the GT program.

In that case, there is a 40%-point difference equating to a potential inequity. Also, keep in mind that if boys' enrollment to girls was 50/50, then now there becomes a possible inequity due to the 10% difference. The inequity would imply that boys are underrepresented in the GT program or that the girls are overrepresented in the GT program. Therefore, Skrla et al. (2004) recommend "that educators in schools and districts start using equity audits to increase equity within our systems. We also recommend that professors in leadership preparation programs teach their students about this tool and ways to use it" (p. 155).

Further research suggests that equity audits be utilized in preparation programs. Furman (2012) examined the literature on social justice leadership in K-12 schools and implied that preparation programs need to use the equity audit framework to reflect and take action on social justice issues. Gabro, Almager, deLeon, Palmer, and Valle (2018) discussed using equity audits as tools for principal interns to systematically analyze their campus based on the equity audit model of Skrla, Mckenzie, and Scheurich (2009). The principal intern, also known as a principal fellow (PF), serve in a 15th month job-embedded principal preparation residency program and conduct an equity audit during the first few weeks on the program. The PFs determine five case studies to work with based on their equity audit findings. The five case studies include two teachers in need of assistance, an ELL learner, a SPED learner, and a content area of need, typically considered the professional learning community (PLC).

The author has used the equity audit framework as described above at the doctoral level. The equity audit consists of the three main components in Table 1, with additions to Skrla et al. (2004) equity audit model. One specific class uses the equity audit framework by adding a financial audit focus on teacher quality and programmatic data. Figure 1 below depicts an example from an equity audit that represents programs related to the actual expenditures.

Figure 2

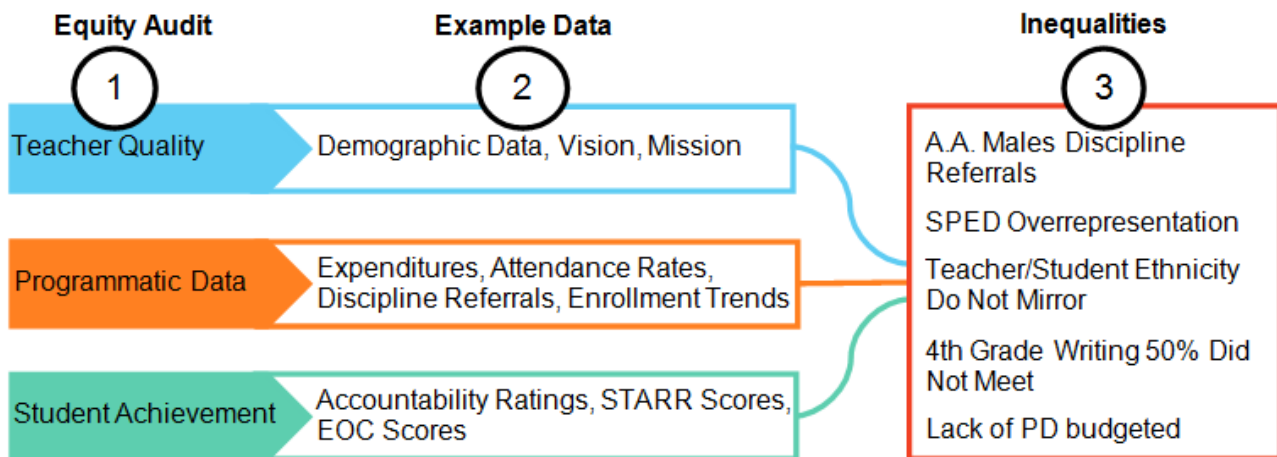*Example of Programmatic Data with Actual Expenditures*

(2018-2019) Funding/Actual Expenditures

Subgroups	Enrollment	District General Fund Per Student Expenditures	District All Funds Per Student Expenditures	% District All Funds	State Per Student Expenditures	Percent State to Total Budget
				Per Student Expenditures		
All Students (Regular)	322	$4495	$4605	50.56%	$4347	59.82%
Accelerated Instruction		$613	$734	8.04%	$320	4.41%
Bil/ESL		$46	$51	0.56%	$116	1.60%
Eco Dis (T1 A)		$410	$823	9.04%	$383	5.27%
Gifted/Talented		$41	$41	0.45%	$74	0.50%
Sped		$998	$1029	11.03%	$1153	15.92%
CTE		$778	$853	9.37%	$296	4.07%

The visual representation shows the actual monies allotted per student for each sub-group compared to the funds and spent across the state. In a corresponding class, the equity audit is expanded strictly into dissecting the student achievement piece. The doctoral students analyze data from a systematic, district-level lens as the Ed.D. program aims to prepare leaders at the executive level in a PK – 12 school setting.

2.3 Conceptual Framework

This study is viewed through an equity audit lens structured by Skrla et al. (2004). The 39 doctoral students completed equity audit PowerPoints in the form of an oral presentation. The author expanded on the equity audit model utilized by Gabro et al. (2018) to take to a more in-depth level connecting school funding to all three areasof the equity audit. Figure 3 below depicts a visual representation of the equity audit framework with a financial focus.

Figure 3

Equity Audit Conceptual Framework

The three main areas of teacher quality, programmatic data, and student achievement funnel through a school district's context where each student can identify and analyze where and how money is utilized within their school. Through the analysis process of the equity audit, inequities are brought to the surface. For example, students can compare the student demographics with the teacher demographics and conclude why a particular student group or ethnicity is underrepresented in special education or why a specific student group has the most discipline referrals.

As the inside-researcher serving as their instructor, all 39 equity audits were analyzed to make my conclusions on the common themes that emerged from the equity audit presentations. Findings revealed inequities exist across school districts in Texas and the significance of this study is to promote more equitable schools and engage doctoral students in culturally responsive leadership practices.

3. Methods

This study's methodology was through the lens of qualitative content analysis examining equity audit presentations of 39 doctoral students from two Ed.D. cohorts. In this study, the researcher wanted to investigate how doctoral students could use equity audits to become positive change agents in their school setting. More importantly, the researcher wanted to know if the equity audits provided a blueprint for identifying and addressing complex problems that address equity, ethics, or social justice.

Content analysis was initially introduced in a quantitative approach objectively examining quantifiable descriptions of the manifest content of communication of written or oral materials (Berelson, 1952). However, Kracauer (1952) argued for content analysis research to be conducted qualitatively where the texts from the verbal or written communication would be analyzed more holistically. Qualitative content analysis is considered a research approach to subjectively interpret data (Schreier, 2012; Krippendorff, 2018). Furthermore, this study used a content analysis where the codes were hand-coded and continuously sorted until significant themes emerged. The themes describe the inequities found in the equity audits that are occurring in actual school settings. The equity audits yielded five major themes.

3.1 Setting

Within the Ed.D. program, the courses model a Bloom's taxonomy hierarchy, where there are three phases of learning. Phase 1 – knowledge and understanding, Phase 2 – application, Phase 3 – evaluation and synthesis. All classes are designed around the program's trademark outcome of developing school leaders who can skillfully evaluate and apply data to implement action plans to solve current problems of practice. Furthermore, the Ed.D. program is designed to cater to cohorts where they stay as a group and on track from Phase 1 through Phase 3 coursework.

As described above, the equity audit for one class is used at the district, systematic level with including a financial piece. From the two cohorts, a total of 39 equity audit presentations were examined to answer the guiding questions:

1. What are the common themes identified in the equity audits associated with equality, ethics, or socialjustice?

2. In what ways did doctoral students take the initiative to address the complex problem(s) ofpractice?

After conducting a content analysis on equity audit presentations, the researcher can assert that equity audits significantly contribute to the CPED framework, the preparation program development, and impacting schools.

4. Findings

Each equity audit revealed several inequities for teacher quality and in the programmatic components. Keep in mind that the student achievement piece of the equity audit was completed in another course. Five common themes emerged. The themes were payroll of teachers compared to the state average, the imbalance of teacher demographics verse student demographics, lack of funding for special populations, a disproportionate amount of discipline referrals of minority students, and the low percentage attendance rate of sub-groups. Another finding that was listed as an inequity was the lack of funding for professional development compared to the state.

4.1 Teacher Quality

Nine doctoral students reported that their district payroll was below the state average. For example, one doctoral student revealed that their average teacher salary at all levels (i.e., new teachers, 1-5 years of experience, 6 − 10 years of experience, 11 -20 years of experience, and over 20 years of experience) was significantly lower than then state average. Additionally, this student reported that the teacher turnover rate is 21.1% compared to the state average of 16.6%. On the same note, as revenue and funding, a few students reported funding per pupil was lower than the state average, yet the tax rate for that school district was much higher than the state average.

The most occurring theme that was reported was the imbalance of teacher demographics compared to the student demographics. There were 16 of 39 equity audits that presented this imbalance. Since the students conducted the equity audit at the district level, one must note that the campuses within that district may or may not reflect an imbalance of teacher demographics verse student demographics.

4.2 Programmatic Equity

Fifteen reports showed a lack of funding for special population groups. The students specifically said that gifted and talented, special education, and bilingual education was amongst the programs receiving limited funding compared to the state average.

The fourth theme was the disproportionate amount of discipline referrals on minority students. Seventeen reports referred to minority students who were referred to the office more than the majority. The inequities revealed that economically disadvantaged, at- risk, African American, and Latino students were the specific student groups and ethnicities reported consisting of the most discipline referrals yet consisted of the lowest enrollment level. For example, one inequity showed that Latino students consisted of 25% of the student population; however, 35% of alternative disciplinary placements consisted of Latino students.

The final theme reported was not mentioned in Table 1 but was included in the equity audit. This finding is on student attendance. There were 13 reports that student sub- groups, specifically special education students, did not attend school as much as the general education student. One equity audit revealed that a total of $200,000 was lost in one school year based on the average daily attendance rate.

5. Discussion

The most interesting inquiry that I reflected on was how some doctoral students were already taking the initiative to solve problems from their equity audit findings. Several reported during their presentation that they had already presented the equity audit to their superintendent. One doctoral student and his superintendent collaboratively discussed the equity audit results and what processes were needed to address the identified problems. One of the findings from this equity audit was that the gifted and talented program was underrepresented and underfunded. The school district took drastic steps and immediately prioritized and hired a gifted and talented director to investigate the problem and address the inequity. However, this particular problem may or may not be considered a complex problem of practice and would need more investigation from the doctoral student.

On the other hand, some doctoral students discussed a deep root inquiry of the inequities' underlying factors. As mentioned above, the disproportionate amount of discipline referrals on minorities was a favorably reported common theme. One doctoral student made inferences on what could be the deep root cause of this occurrence. This student stated,

"One of the most apparent inequities present is that of the demographics of the students that make up the disciplinary placements. Considering that the student population of no-name ISD is 62.3% white, yet the discipline data shows that white students only make up 11.2% of the student suspensions. Similarly, African American students made up 45% of all in-school suspensions. So, while these students were in school, they were removed from their classroom and therefore missed instruction."

The student then explains taking a more in-depth look into why students are placed in-school suspension. The student goes on and mentions how he would implement social and emotional learning practices. He further states, "If a student's actions were egregious enough to warrant removal from the classroom, perhaps, there could be

something better to provide them with instruction." In this case, the doctoral student concludes the root cause of what caused the discipline referral and has implied that it could be the teacher's instructional practice. The doctoral student did mention that worksheets would be of no assistance for effective classroom instruction.

The takeaways from the equity audits are powerful and should be used as tools for doctoral students to identify and address complex problems of practice. One example of using the equity audit and discussing the disproportionate of discipline referrals with minority students is a complex problem of practice. It started with a large number ofdiscipline referrals; then narrowed down to finding that minority students were representing the most discipline referrals; to if students are placed in out of school suspension (OSS) then now school funding is affected; to ISS staff for students mainly includes substitutes; to low attendance and low student achievement scores. After conducting the equity audit, the doctoral students are taking a systematic approach looking at the deep root underlying factors that may prompt the discipline referral in the first place. Furthermore, their attention is to focus on instructional practices within the classroom to prevent discipline referrals, promote higher attendance, and improve student achievement.

In our Ed.D. program, equity audits have become a signature pedagogy. Skrla et al. (2004) equity audit framework serves as a basis for our Ed.D. program to customize the tool to address more areas such as school finance and budget components within school districts. The equity audits are living documents for the doctoral students to refine and expand on through their doctoral journey. The equity audits occur in year one, so the doctoral students can start identifying current and real-world complex problems occurring in their school district. At the end of the doctoral journey, the doctoral students can successfully complete a DiP that enhances and adds value to leadership in both campus and district organizations that positively impact student learning in PreK-12 classrooms.

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