



The Cultivation of Novice Teachers: How Administrators Design, Support, and Evaluate Induction Programs in Rural Schools

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Abstract

Novice teacher induction studies often focus on the novice teachers' perceptions of the program, but this investigation is designed to focus on the administrators' perceptions and role in novice teacher induction programs within K-12 public, rural school districts. This qualitative bounded case study of administrators from 59 school districts in Northwest Missouri identified as rural and were situated in a town with populations of 2,500 or less [1] includes the findings from surveys, interviews, and a document analysis. The lived experiences and perceptions collected in this investigation shed light towards understanding the administrators' role in the design, support, and evaluation of novice teacher induction programs and revealed roles central to two functions: Formal and informal. The findings of this study attempt to fill a gap in the current literature surrounding the administrator's role and provide useful insight for practitioners who participate in the design, support, and evaluation of induction practices in their districts.

Keywords: Novice teacher induction; Mentoring; Administrators; Educational leadership; Rural education; School culture

Abbreviations: Association for Career and Technical Education (ACTE); Career and Technical Education (CTE); Missouri Department of Elementary and Secondary Education (DESE); Northwest Regional Professional Development Center (NWRPDC)

Introduction

Throughout history, evidence exists of the training and development of workers in various professions, often coined 'mentoring', and is defined in Merriam Webster [2] as "the influence, guidance, or direction given by a mentor" (para. 1). 'Mentor' was first used in Homer's *Odyssey* sometime between the Eighth and Sixth centuries BCE [3]. This idea of mentoring has continued to evolve throughout history to meet various personal and professional needs and industry standards (American Institutes for Research, 2015), and is likened to the use of apprenticeships for teaching trade skills dating back to 1776 [4], and contemporary vocational training, known as Career and Technical Education

(CTE) which emerged in 1917 [4]. Through the evolution of these various training models, novice teacher induction is situated prominently as the model used in school districts and is considered a logical, continuous professional development process [5] of learning through experience. Novice teacher induction, when comprehensive, trains and guides novice teachers to promote the navigation of the cultural, social, and technical aspects of being a new teacher, while systematically helping them to assimilate to the school district and teaching profession [6-9].

Research surrounding novice teacher induction programs have been found to impact novice teacher satisfaction and confidence

levels [10,11], supported the new teachers' growth, effectiveness, and retention [12-14] and connected pre-service training to the realities of teaching [6,15]. Furthermore, Brownell et al. [6], Potemski et al. [8], and Strong [9] found novice teacher induction programs had a positive impact on novice teacher instructional practices, the effectiveness of instruction, and students' learning outcomes.

Induction programs have helped novice teachers become successful in their new roles by teaching them about the profession, tools of the trade, and models used by school district officials [14]. Nonaka [16] emphasized the importance of high-quality experiences in knowledge creation, which might have redefined what was considered the "nature of the job" (p. 21). Potemski et al. [8] wrote, "An induction program is a larger system of support that often includes mentoring but also includes additional supports, such as help with curriculum planning and professional development" (p. 1), and Darling-Hammond and DePaoli [17] wrote these supportive communities of practice helped to better meet students' needs.

Schein's [18] work on organizational culture sets the stage for creating learning cultures within organizations defined by the values, beliefs and assumptions, norms and behaviors, and the aspects of how people think, feel, and act as a part of the organization [19]. A sense of community is created within the induction environment and engages the novice teacher in the school culture, allowing the novice teacher to model the cultural and social sense of belonging for students [20], which is essential for developing caring relationships [21]. Furthermore, Gill [19] wrote this culture was "passed on to new employees by what they are told and what they observe in the behavior, symbols, and documents around them" (p. 5).

An induction program typically includes the following attributes: "high-quality mentoring, ongoing professional development, access to an external network of beginning teachers, and standards-based evaluations of beginning teachers" [14]. These attributes also have been connected to strong coaching mentors, innovative research practices, and collegial discussions amongst mentors, mentees, and administrators (Watkins, 2005). This article takes a purposeful look into the administrator's role in novice teacher induction in K-12 rural, public-school districts in Northwest Missouri.

Study Rationale

Many research studies have been conducted on urban school induction programs or have focused on novice teacher perceptions of mentoring [7,8,22,23]. For the purposes of this study, the term "induction" was used in place of the term "mentoring," utilizing Potemski et al.'s [8] definition of induction programs, which included mentoring as one possible component of the overall induction of novice teachers. Darling-Hammond and DePaoli [17] wrote teacher stress, burnout, and inadequate skills contribute to teacher attrition and shortages, furthermore, "A strong, stable, diverse, and well-prepared teaching and leadership workforce is perhaps the most important ingredient" impacting the school district culture (p. 10). MacNeil et al. [24] wrote that the administrator focusing on the school culture development is essential for enhancing teacher

morale. Furthermore, Black [25] wrote many administrators recognized the excitement of novice teachers as they started their new careers, but found they were "ill-equipped" (p. 46), and novice teachers are expected to fulfill the same demands as experienced teachers, indicating a gap in the literature surrounding the administrator's role in the culture of the learning environment within the novice teacher induction process. Literature abounds around administrators' roles as leaders with multiple responsibilities [26,27], but has been lacking a targeted focus on the administrators' perspectives and roles in induction programs [28-30]. Considering the impacts of barriers experienced within rural education, administrator decision-making is greatly influenced when only one building administrator is often responsible for all decision making and personnel support. Dogan [20] wrote culture creates "the best environment for facilitating teaching and learning programs and also engage staff with the school" (p. 256), and the administrator has many responsibilities for instilling this culture in people. Protheroe [29] determined administrators played roles in the participation in novice teacher induction programs, but the extent of the administrator's participation, particularly as it applies to the rural school administrator, remains a gap in the literature.

The overarching research question guiding this study was: What is the role of the school administrator in the design, support, and evaluation induction programs in rural, public K-12 schools in Northwest Missouri?

Review of Relevant Literature

Using the lenses of Schein's [18] Levels of Culture, Novice Teacher Induction, Rural, Public K-12 Education, and Leadership in K-12 Public Education, the following review of literature explores the role of educational leaders in novice teacher induction within rural, public K-12 school districts. Schein's [18] Levels of Culture (see Figure 1) was used as the theoretical framework to guide this study. Furthermore, three conceptual underpinnings were used to provide a framework for this investigation: (a) Novice Teacher Induction, (b) Rural Public K-12 Education, and (c) Leadership in K-12 Public Education (Figure 1).

Theoretical Framework

Culture in an organization is an ever-changing-phenomenon all-encompassing impacted by behavior and interactions, while also affecting the norms and behaviors of those within organizations [18]. Stoll [31] defined culture as manifests in customs, rituals, symbols, stories, and other artifacts, and Kutsyuruba et al. [32] wrote, "Humans learn to organize their thoughts, emotions, and behaviors based on shared norms, beliefs, values, customs, and traditions that are common to a group of people" (p. 692). Culture is abstract and difficult to define but can be a practical means for creating profound change in an organization [18]. Schein [18] defined organizations as "social units" (p. 11) with defining characteristics and shared histories. Furthermore, Schein [18] identified categories used to describe culture from a multitude of research on organizations, "Observed behavior regularities, group norms, espoused values, formal philosophy, rules of the game, climate, embedded skills, habits of thinking, mental models,

and linguistic paradigms, shared meanings, root metaphors or integrating symbols, and formal rituals and celebrations” (p. 13). The critical elements shared in organizations’ cultures were the following: “Structural stability, depth, breadth, and patterning or

integration” [18]. Schein’s [18] Levels of Culture (see Figure 1) were used in this study to provide a lens for viewing organizational culture, the evidence, and the representative symbols of culture.

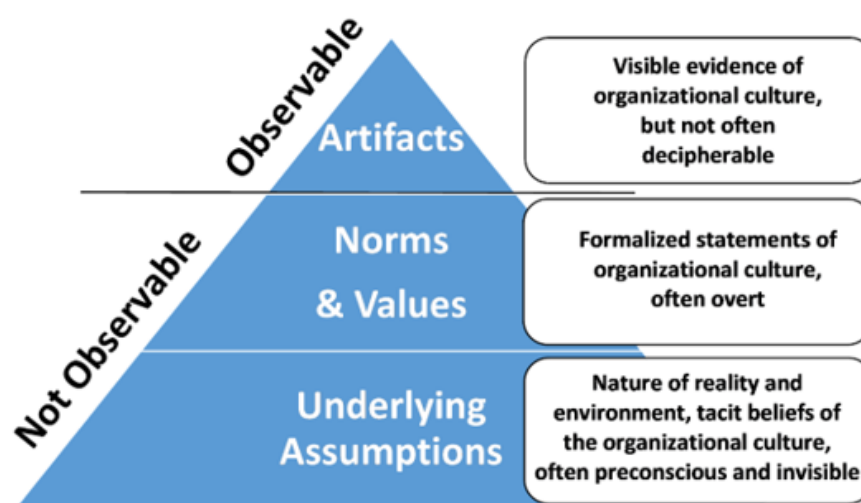


Figure 1: Schein’s Levels of Culture.

Note: This figure was modified from Schein’s (2004) *Organizational Culture and Leadership*.

Novice Teacher Induction

The detailed process of learning and teaching novice teachers to promote navigation through the profession is referred to as novice teacher induction [5,6]. Black [25] wrote, “Beginning teachers do not enter the classroom as finished products” (p. 46). The novice teacher induction process, which may include mentoring as an interchangeable term to describe the process [8], is used to help new teachers develop a sense of belonging [18] within the educational system [7]. Induction programs have been multi-year processes for training and acculturation [5] used to introduce new teachers to the teaching profession, tools, and models needed to be successful in their new careers [14], and systems of induction have been required for novice teachers in 48 states [33]. Improved quality of instruction, effectiveness of instruction, and improved student learning were all outcomes associated with high quality induction programs [6,8,9]. Furthermore, induction programs have been found to impact the novice teachers’ levels of fulfillment and confidence [10,11], and teachers in induction programs had an increased likelihood of participating in future professional development opportunities [34]. Varying definitions for defining induction, in addition to the impact of induction programs on student outcomes and teacher satisfaction point toward a need for a deeper look into novice teacher induction practices [5,6,8,9].

Rural K-12 Education

For the purposes of this study, Ratcliffe et al.’s [1] definition, written on behalf of the U.S. Census Bureau, was used for the definition of rural education. Rural regions are the remaining spaces not included within urban areas, which consisted of areas

with more than 50,000 people and suburban areas of more than 2,500 people, thus, rural areas in the U.S. consisted of places with less than 2,500 people counted in the population [1,35]. Other definitions of rural areas have existed in the literature, so it was recommended further research in this area occur before attempting to replicate this study.

Rural schools can be found across the United States [36], and one out of every four students in the U.S. attend schools in rural areas [37]. Rural, public K-12 education experienced distinctive challenges different than their urban equivalents [36,37]. Challenges of rural schools contrasting those schools in urban centers include: (a) greater gaps in achievement of white students [36], (b) lower educational attainment [35], (c) tight budgets, (d) low staff salaries, (e) scarce resources, (f) underfunded districts, (g) limited access to advanced courses, such as Advanced Placement classes [36], (h) lower staff salaries (Showalter et al., 2019), and (i) challenges in rural areas due to the lack of social activities for young teachers [38]. Furthermore, challenges also occurred in the areas of: (a) teacher turnover when teachers work for a few years to gain experience before moving on [36], (b) teachers spending more time planning lessons [39], (c) isolation and limited collaboration [40], (d) teacher resignations at a rate of 25% after three years and 39% after five years [41], (e) uncertified substitutes filling teaching shortages [36,38,42], and (f) need for professional development to support the diverse needs of learners [36]. Berry et al. [43] found these factors may have increased the attrition rates for teachers in rural areas and identified areas where professional development was needed.

Leadership in K-12 Public Education

Leaders in K-12 public education take on many roles in school districts, and there can be much variance in job titles and responsibilities of educational leaders across the country [44,45]. For the purposes of this study, the research will focus on leaders in K-12 public education in any administrative role with direct charge over novice teacher induction programs. School building administrators in the U.S. assume many responsibilities including: (a) strategy and planning, (b) student instruction, (c) budgeting, (d) law, (e) personnel management, (f) community relations, and (g) other school business [44,45]. In addition, Barbara, and Grady (2007) found leader responsibilities included even more tasks, such as (a) determining the mission and vision of the school, (b) motivating employees, and (c) making decisions, and Dogan [20] wrote the school culture influences the way administrators “think, feel, and behave” (p. 253). Within these responsibilities, administrators reported challenges leading teachers to develop their professional skills, high turnover, retention issues, certification issues, and lack of training and professional development to fit the needs of teachers [46]. Despite these challenges, Chan et al., [46] reported administrators are more professionally fulfilled when they witnessed teachers growing professionally. Chan et al., [46] also reported it was a “great achievement” (p. 52), “satisfying to see good teachers that you hire really do a good job and become effective educators” (p. 52), and Pearson (2015) found a solid organizational culture provided a structure to affect employee behavior. Furthermore, school leaders in rural areas had more responsibilities than their urban peers due to the shared responsibilities amongst multiple administrators in larger school districts [40].

The impact of the multitude of responsibilities on administrators in the U.S. [44,45] has been known, awareness has surrounded the challenges in rural schools which were further impacted by shortages of qualified teachers in rural areas (Mitchell, 2021), focuses on the administrators’ responsibilities to create learning environments to develop teachers and increased student achievement was understood [47], and the impact of creating and influencing the school culture has been studied [20]. These factors indicated the need for further research surrounding K-12 administrators’ roles in the design, support, and evaluation of rural novice teacher induction programs.

Materials and Methods

A bounded case study [48,49] provided voice to the lived experiences and professional practices of current administrators’ surrounding their roles in the design, support, and evaluation of novice teacher induction in rural, public K-12 school districts in the region of Northwest Missouri. All data were qualitative in nature, and a process was used to ensure research ethics were followed, and trustworthiness was achieved [48,49,50].

7Data Collection

Participants in the study were selected as a purposeful, convenience sample [48,49,51], which included school administrators from the 59 school districts identified as rural (Table 1) willing to participate in the study to reflect on current and past novice teacher induction practices within their school district. The method of participation varied based on the participants’ experiences and consisted of a combination of surveys, interviews, and novice teacher induction program document analysis conducted by the researcher (Table 1).

Table 1: School District Participant Pool and Town Population Size.

School District	Town	Town Population
Albany R-III	Albany	1,679
Avenue City R-IX	Cosby	124
Braymer C-4	Braymer	737
Breckenridge R-I	Breckenridge	258
Buchanan Co R-IV	DeKalb	220
Cainsville R-I	Cainsville	283
Cowgill R-VI	Cowgill	168
Craig R-III	Craig	105
East Buchanan C-1	Gower	1,526
Fairfax R-III	Fairfax	648
Gallatin R-V	Gallatin	1,821
Gilman City R-IV	Gilman City	329
Grundy Co R-V	Galt	168
Hale R-I	Hale	375
Hamilton R-II	Hamilton	1,690
Jefferson C-123	Conception Junction	198
King City R-I	King City	799

Kingston 42	Kingston	290
Laredo R-VII	Laredo	156
Lathrop R-II	Lathrop	2,086
Livingston Co R-III	Chula	195
Marceline R-V	Marceline	2,123
Maysville R-I	Maysville	1,095
Meadville R-IV	Meadville	415
Mid-Buchanan R-VI	Faucett	831
Mirable C-I	Polo	509
Mound City R-II	Mound City	1,004
New York R-IV	Hamilton	1,690
Newtown-Harris R-III	Newtown	113
Nodaway-Holt R-VII	Graham	171
Norborne R-VIII	Norborne	634
North Andrew R-VI	Rosendale	143
North Daviess R-III	Jameson	73
North Harrison R-III	Eagleville	275
North Mercer R-III	Mercer	263
North Nodaway R-VI	Hopkins	532
North Platte Co. R-I	Dearborn	496
Northeast Nodaway R-V	Ravenwood	440
Orrick R-XI	Orrick	753
Osborn R-0	Osborn	374
Pattonsburg R-II	Pattonsburg	314
Polo R-VII	Polo	509
Princeton R-V	Princeton	1,166
Ridgeway R-V	Ridgeway	372
Rock Port R-II	Rock Port	1,278
South Holt R-I	Oregon	837
South Nodaway R-IV	Barnard	221
Southwest Livingston R-I	Ludlow	111
Spickard R-II	Spickard	222
Stanberry R-II	Stanberry	1,129
Stewartsville C-5	Stewartsville	733
Tarkio R-I	Tarkio	1,508
Tina-Avalon R-II	Tina	139
Tri-County R-VII	Jamesport	559
Union Star R-II	Union Star	380
West Nodaway R-I	Burlington Junction	537
West Platte Co. R-II	Weston	1,641
Winston R-VI	Winston	229
Worth Co R-III	Grant City	859

Note: Table 1 shows the school district, town, and population size for the districts which served as the participant pool.

District Identification

The setting of this study was rural, Northwest Missouri and consisted of administrators from school districts served by region

five of the Northwest Regional Professional Development Center (NWRPDC) [52]. The NWRPDC was a regional branch of the Missouri Department of Elementary and Secondary Education (DESE)

with a mission to “build the capacity of educators and schools to maximize student performance through high quality professional development” [53], and their partnership helped facilitate the initial communication efforts with the researcher and participants. Using the Ratcliffe et al. [1] definition of a rural school, 59 of the schools served by NWRPDC met the population threshold to be considered rural schools (see Table 1). The researcher conducted the research digitally or face-to-face based on the preference of the participants.

Participant Selection

Participants were administrators from elementary, middle, high school, or the district level, and some participants supervised some overlapping combination of grade levels, such as K-12 or

middle/high school. Forty-three administrators responded to the initial contact made through an email by completing the electronic survey during the two-week window the survey was available. Convenience sampling from the population was used, and districts who did not meet the rural population threshold were eliminated from the possible sample due to the researcher’s desire to investigate rural school districts in Northwest Missouri [48,49]. Once administrators were identified as willing participants, further contact was made through email, phone calls, and/or face-to-face contact to schedule and to conduct interviews and to receive documents for the document analysis, and six participants were identified (Table 2). Informed consent was received from all participants, which included the option to opt out of the study at any time [48,49] (Table 2).

Table 2: Participant Pseudonym, School District, and Role.

Participant Pseudonym	Participant School District	Role
Samuel Ashford	Ottawa	Superintendent
Anna Canton	Mountain Butte	Elementary Principal
David Jacobs	Kattan County	Superintendent
Abigail Kutter	Mountain Butte	MS/HS Principal
Lydia Rogers	Mercyville	Special Education Director
Spencer Wright	Rock Port	Elementary Principal

Note: Table 2 are the assigned pseudonyms for the participants’ names, school districts, and their actual roles within their district.

Survey

An electronic survey was used to collect initial perspectives from administrators regarding the induction practices in their districts and identified perceived gaps in the programming [51,54]. The survey was sent via email directly to district administrators using the list of administrators provided by the NWRPDC [52] using QualtricsXM [55].

Informed consent, outlining the potential benefits and risks, was obtained from participants through the embedded agreement within the first page of the survey, allowing participants to opt in to continue or to opt out of the study, and no participant was able to participate without giving consent [48,49,51]. The survey consisted of semi-structured and open-ended questions [51]. Because the survey was sent to the participant group, there was no representative sample.

Interview

Structured interviews of participants were used to capture the lived experiences of the administrators surrounding their induction program role [48,56]. Participants for the administrator interviews were selected purposefully to allow the researcher to flesh out further details and experiences gleaned from the survey responses identified by the researcher as those of interest [48]. Seidman’s [56] guidelines were used to design the interview questions to ensure they were bias free and open ended which supported the confirmability of the questions. Participants were informed the interview would last approximately 30-45 minutes

[56]. Informed consent was obtained again from participants during the interview process, and participants could choose to not answer questions or to opt out of the study at any time [48,49,51]. To address issues with confirmability, verbatim transcripts were used, and member checks were conducted following all interviews [48,49,56]. The researcher audio recorded the interviews and then created verbatim transcripts using a media transcription service, creating an audit trail for the study. Member checking followed the interviews to ensure participants’ voices were heard accurately as the data were processed to make meaning [48,49,56].

Document Analysis

The document analysis included the following novice teacher induction artifacts from districts: (a) policy manuals, (b) training manuals, and (c) any other resources used for novice teacher induction as identified by the administrators. For some participants, the school administrators or boards of education were the gatekeepers to the various documents, so the researcher communicated via email, phone, digitally, and/or face-to-face during the interview processes to obtain the necessary documents [57]. The documents were reviewed simultaneously with the survey and interview data to determine if support of induction programs aligned with the perspectives of the administration and allowed for triangulation and added credibility to the investigation [48]. Following the recommendations of Yin [58], the researcher found the document analysis confirmed the details found in the other data sources.

Data Analysis

The use of three data sources in the form of electronic surveys of administrators, administrator interviews, and analysis of documents identified by administrators reflecting the various school districts' induction practices provided triangulation to ensure a credibility of the study [48,49] and supported the comprehensive understanding of the problem of practice and to answer the research question [59]. Furthermore, saturation amongst all data collected added to the transferability of the findings and recommendations for both scholarly and practitioner practice [48,49].

A process for coding the documents and interview notes allowed the researcher to identify themes that surfaced from the data [60]. Explicit logic was used, and a chain of evidence was documented, outlining how data were tracked to the source to ensure confirmability and allow for the replication of the study [48,49]. Inductive coding through the procedure of open coding (line-by-line) was used for the survey, as well as data from the interviews and document analyses [48,49,61]. The data from the survey were coded first, allowing the researcher to determine the interview questions that needed to be expanded upon. McDavid et al. [54] wrote the flexible and fluid nature of the data collection, and the analysis process allows for "eliciting ideas on interpretation of existing information, perspectives that may have been missed, or ideas about how trends and the internal and external context affect both unmet needs and possible solutions" (p. 78). Following the open coding, the responses to all three data sources were axially coded, which is the process of identifying relationships or linking data together through categories and subcategories and resulted in the identification of categories of data [48,49,61]. The data were organized using constant comparative methods into themes which emerged in the coding process [48,61]. This process of coding the data were an ongoing and continuous process until saturation was reached, producing a rich, thick description of the investigation using quotes in the findings, which added to the credibility of the study [48]. Member checking throughout the data collection process, ensuring accuracy, as the researcher strived to make meaning and sense of the data collected from participants [48,49,61]. Additionally, audits were conducted to review transcripts, field notes, and coding procedures to ensure greater confirmability [48,49,56,61]. Dependability audits were conducted to ensure accuracy as patterns arose in the data and the patterns were documented appropriately, allowing other researchers to replicate the study [48,49]. Confidentiality of participants was maintained throughout the study through anonymity of the survey responses and the use of pseudonyms for participants and school districts' names [48,49,50], and quotes were used to make connections in

the results by using rich data [62]. Lastly, data were protected and stored, using a double-authenticated password-protected online storage system to prevent the distribution of confidential research materials [48,50,61].

Limitations

Because this was a qualitative study, the results collected were limited to the participants' experiences. There was a possibility the participants were not forthcoming and/or were incomplete in fear of impacting themselves or their school districts in a negative way, which in turn could have impacted the results of the study [48,49]. Efforts to address this potential limitation were made by the researcher by ensuring confidentiality of participants' responses through the informed consent and through the applications of pseudonyms in place of participants' given names.

Another limitation was the participants may not have played a role in the district's induction practices, which could impact the results based on the administrator's knowledge of the district's induction practices. Additionally, the researcher may have had limited access to information for the document analysis due to these documents being provided in good faith by the district administrators. Every effort was made by the researcher to secure all district documents for the analysis to ensure this limitation was being addressed appropriately.

Lastly, time could be considered an issue when data were collected due to administrators' busy schedules. The researcher addressed this limitation by conducting interviews based on the administrators' preferences either digitally, by phone, or face-to-face to ensure the administrators were given flexibility to participate based on their schedule limitations.

Results

The lived experiences and professional practices of current administrators gave voice and were used to identify themes from the data based on how administrators viewed themselves fitting into roles within novice teacher induction programs in their school district. Two themes emerged as the data were collected and analyzed. Administrator's responsibilities for the design, support, and evaluation of novice teacher induction programs in rural school district were cataloged into two roles: Formal and informal. A summary of the formal role findings is found in Table 3 and informal role findings in Table 4 used to answer the research question: What is the role of the school administrator in the design, support, and evaluation induction programs in rural, public K-12 schools in Northwest Missouri? (Table 3,4).

Table 3: Summary of Formal Role Findings.

Design	Support	Evaluation
Scheduling meetings	Facilitate meetings	Formally assess professional development needs
Develop agenda	Allocate resources, time, money, and materials	Monitor teacher retention and turnover
Assign mentors	Authorize leave time for observation and professional development	Solicit formal feedback

Design log forms	Communicate expectations	
Embed mission, visions, and goals into various induction documents	Schedule check-ins with mentors and mentees	
Outline expectations for the induction program		

Note: Table 3 is a summary of the findings associated with the formal role of the administrators in novice teacher induction.

Table 4: Summary of Informal Role Findings.

Design	Support	Evaluation
Use intuition to select mentors and make mentor/mentee matches	Model behavior for novice teachers	Informally assess professional development needs through discussion
Recommend mentor activities	Provide emotional support and encouragement	Solicit informal feedback through discussion
Consider proximity for support	Focus on well-being	Use informal observation and intuition to evaluate effectiveness of mentor and novice teacher
	Make themselves visible, accessible, and strive to be transparent Build relationships	
	Communicate with novice teachers and mentors	
	Conduct informal check-in	

Note: Table 4 is a summary of the findings associated with the informal role of the administrators in novice teacher induction.

Making Sense of the Formal Role

The administrator's formal role in novice teacher induction programs is those which are more procedural and organized in nature. Administrators often schedule, set agendas for, and facilitate meetings. They embed the mission, vision, and goals into various documents used in the induction process. Furthermore, administrators select mentors, allocating time, mentor and novice teacher time, money, and other resources as determined necessary to help the novice teacher develop professionally. In rural districts, administrators are familiar with their teacher retention numbers due to smaller staff sizes and play a role in assessing the needs of those novice teachers. Some administrators delegated these formal responsibilities to other administrators or mentors within the district, while others completed the tasks within the formal role themselves. The formal role of administrators in novice teacher induction emerged consistently in the data and were evident through items such as: The design of log forms, the design of agendas for novice teacher induction meetings, the planning of meeting times and other scheduling, and the assessment of novice teacher professional development needs.

Across all three data sources, evidence of the administrator's role in the design of various forms, agendas, and other formal documents used in the novice teacher induction process was consistent. Some administrators who participated in this delegated this responsibility to others within the district. David shared:

My two long standing principals have collaborated to put together a list of items that are important to being successful at

Kattan County School District such as clarification on 'nuts and bolts' procedures like using the student information system, grading practices, P.O. procedures.

Other administrators provided documents demonstrating the design of formal documents used for the novice teacher induction practices such as: Procedures, contact information, and resources, such as technology, locations of supplies, and forms for leave time, were visible (document), and this was also observed within a document stating:

Welcome to the Ottawa School District! The first year of teaching is one of the most challenging periods you will experience in your career. This year, you will have the opportunity to work directly with an experienced teacher as a consultant, coach, and colleague. Mentoring is an ongoing relationship that extends throughout the first year of a new teacher's professional practice. The mentoring program is designed to last two years as required by DESE. This handbook provides a detailed look at how mentoring will work.

Additionally, administrators served in their formal roles by supporting novice teachers through the induction process. Administrators supported roles, which included the scheduling of meeting times. Anna explained, "So, when we meet with just start new staff and our new teachers, that's a lot of PD and team building. So, it's a lot of relationship building." Furthermore, the meetings scheduled by administrators were often used to help the novice teacher meet other co-workers and familiarize them with people, resources, and procedures. Abigail stated:

[sic], the other piece of that I would say is the social aspect. So, letting all the new teachers meet each other, [sic], letting them meet me, get to know me, [sic], the other people in the building who are gonna support them, their technology, integration specialist, assistant principal, things like that.

Administrators also formally supported novice teachers by assessing their professional development needs and provided time, money, and other support to continue to grow professionally in their first years. Lydia stated, "Once the school started and they got going, I did a needs assessment to kind of see what each one of them needed, [sic], to help out in that way." Moreover, in the formal role of evaluation, most administrators felt this was an area they did not do well in. Spencer noted, "There's no formal evaluation." David was asked how novice teacher induction were evaluated and he responded, "Probably not very well."

Another administrator, Anna, shared:

I think that we don't offer a lot of time for new teachers to reflect on their practices because they're trying to learn so much that first year. So probably just more of a reflection with their mentor because sometimes they don't always want to reflect with their administrator because they don't want to look like they're not capable.

In the area of evaluation, the data also indicated the administrators tried to be visible in the novice teachers' classroom, and Anna explained, "We try to get in the classroom a lot. And so probably more with new staff just to make sure they're not feeling overwhelmed and do temperature checks with them in an ideal situation."

Additionally, David indicated he tried to evaluate their teachers' needs as a whole staff rather than singling out only novice teachers, and explained:

I seek feedback from my staff, and it doesn't hurt that my wife teaches in the building. I hear the teacher's perspective. That doesn't mean everyone always agrees with my decisions, but few would argue I do not have the best interests of students and teachers in mind.

Lastly, Spencer indicated a good way to evaluate the success of the novice teacher induction practices within their school district would be to consider the retention of their teachers.

I guess the first thing that comes to mind is retention. You know, are we, are we hanging on to those new teachers? You know, there's some pretty startling facts out there that, you know, within three years, you know, 64%, [sic], are still there. And then after five years, only 48% of, of teachers are still there. So, you know, getting, getting them to that, three-year mark, and five-year mark. [sic], I feel like can be a sign of, of a good support system in place.

Making Sense of the Informal Role

The informal role of the administrator is shaped by their own previous experiences and this role lends itself to the use of intuition for responding to situations and making decisions.

When the administrator assumes the informal role, they design and recommend mentor activities based on what they believe the novice teacher needs. Using this informal position, administrators select mentors for novice teachers based on perceptions of their personalities and use proximity to other similar teachers when available. Administrators are aware their behavior serves as a model for their teachers, and choose to provide emotional support, encouragement, and work to build relationships by being visible in their building and at district activities.

They believed being more visible to novice teachers made the novice teachers feel more comfortable approaching them when necessary. Furthermore, by engaging in conversations, they used this intuition to gauge and to evaluate the professional development needs of their teachers and to receive feedback, which may have been beneficial to the administrators to reinforce their beliefs or to guide their decision making. The informal roles of administrators in novice teacher induction emerged consistently in the data and were evident through items, such as the use of the administrators' previous experiences and personal beliefs or values used as the basis for decision making for novice teacher induction district practices, to make themselves visible and available, to model behavior, to communicate and build relationships, and to use informal feedback to make decisions.

When considering the administrators' informal role in the design of novice teacher induction practices, the administrators' personal experiences, beliefs, and values were evident as the guide for decision making. One administrator, Samuel explained "I honestly, to be honest with you, for me, it's just a feeling." Moreover, the use of their own experiences and beliefs was also apparent in the selection of mentors for novice teachers as Abigail explained:

I talked to our building leadership team. Usually, those individuals are the ones who are going to be a little bit more invested in the school. So, they're going to want to invest in new teachers as well. [sic], also kind of look for, like I said, [sic], proximity. So, who's in the hallway with them.

Further supporting the use of their own experiences and beliefs, Anna remarked, "[sic], when we pair them up with a mentor, we always think strategically." Furthermore, Abigail considered how the mentor would communicate the culture of the district to the novice teacher and shared, "I think our building climate plays a huge role in developing novice teachers. Novice teachers need mentors who are supportive, approachable, and in love with the district."

In addition, many administrators expressed that they viewed their informal support roles as they were viewed by their novice teachers. To support the novice teacher, Samuel focused on how he made himself visible and available, modeled behavior, communicated and built relationships by explaining, "I try to get out, I try to make myself available to them, be seen my door is open." David agreed and shared, "I think most, most of my teachers will say, look, we all have his cell phone. We can all send him a text and probably unless, unless it's midnight to six and he's probably gonna respond pretty quick."

Samuel, a school superintendent, explained that it was important to be viewed by novice teachers in a certain way. He said:

I think they need to know who the superintendent is. They need to be able to feel comfortable to talk to the superintendent. Uh, so I think that's a big thing that sometimes I see it happen more in bigger schools obviously, but you know, the smaller school setting for us, you know, I think it's beneficial if, you know, you have there, you're having those conversations with those teachers in that way, you can help them. And they know that we're all in this together and it's not, you know, you don't want to see a separation of admin and staff.

When considering the administrator's informal role in evaluating novice teacher induction practices, many administrators indicated they did not conduct formal evaluation measures, rather relied upon informal 'check-ins' with novice teachers as a means of evaluation. An administered Abigail shared about formal evaluation:

There's no formal evaluation, but I'm checking in with them of like, hey, where are they at? What do you think? What struggles are they having? Is there something I should be looking for in the classroom or something you think they're doing really great that I should go, see?

A superintendent, David, also seeks feedback by asking for it from others in his district as he said, "I do ask for a lot of feedback from people." Moreover, Abigail informally evaluated the mental health and/or personal life of their staff by using these 'check-ins'. Abigail explained:

A lot of times I try to ask people about, you know, [sic], things that are going on in their personal life, and so it's checking in, especially with newer teachers checking in with them, how are you doing, how are you feeling about this? What concerns do you have? What struggles are you feeling? [sic], because I want them to be successful people first and successful teachers the second, because if they're not a successful person and they don't feel validated, they don't feel healthy.

Samuel also agreed on projecting an informal approach. He explained:

I'll meet with them, I'll talk to them a little bit, but I don't try to overwhelm them as you know, cause, [sic], I'm the boss and everybody freaks out because, oh, I'm talking to them. I try to make it as informal as possible because I don't want them to freak out that I'm coming and talking to them.

Furthermore, a unique finding emerged throughout the study in self-reflection by the administrators. Many administrators expressed a desire to do more in terms of novice teacher induction. Abigail firmly replied:

I don't do enough when it comes to induction. [sic], but I think it's an area that, to be honest, I never got any training on, I would never say that my master's or specialist [degrees] did not prepare me for this job. I don't know that it was ever a topic of any class.

And Spencer was reflective in his response:

Only what I went through myself as a, as a new her and a new administrator, just going through some of those programs, [sic], you know, try to take some components of, of the AMP [Administrator Mentoring Program] program the administrator mentoring program, [sic], that I went through a few years ago found that that was very valuable.

Discussion

When considering the administrator's role in the design, support, and evaluation of novice teacher induction in rural, public K-12 schools in Northwest Missouri, it is evident through the data the administrators served in two distinct roles, formal and informal. Meaning is made of these two roles when considered the formal role, the administrator as a gardener, and the informal role, the administrator as a pollinator.

The administrator's formal role in novice teacher induction is like a gardener. The gardener tills the soil to prepare it. They plant the seeds. The gardener must water the plants when the rain doesn't come naturally. As the weeds grow, the gardener responds by assessing their danger to the plants and gets rid of the weeds, as necessary. Finally, the gardener steps back and waits to see what grows. A good gardener knows standing over the plant doesn't make it grow faster, so they wait for their produce to come in due time. So, too, is the administrator's formal role in novice teacher induction. The findings of this study concluded the administrator designs and prepares for the program. Furthermore, they select mentors and provide time, resources, and money to support the novice teacher's growth. Through the formal evaluation role, the administrator determines what helps and does not help the novice teacher acclimation to the school district, and the administrator continues to watch and wait for the novice teacher to grow and develop into a teacher leader within their school district.

Likewise, the administrator's informal role in novice teacher induction is like the bee, butterfly, and insect serving as a pollinator--inadvertently pollinating the plants through their naturalistic instinct and "drawing" to the plants. The pollinators do not recognize the direct impacts of their work, nor can their work be measured, much like the administrator's informal role. The use of intuition to make decisions, informal check-ins, focus on well-being, and encouragement may not be easily measured in terms of the direct impact on the novice teacher, but are done so as an instinct of the administrator based on their beliefs and perceptions surrounding the needs of novice teachers. The garden cannot be successful without these pollinators as they provide a cyclical role in the entire growing process of the plant.

Conclusion

Practitioner and scholarly recommendations emerged from the formal and informal administrators' roles in novice teacher induction practices in K-12 public, rural Northwest Missouri. These recommendations can be applied by practitioners who are currently responsible for novice teacher induction in their school districts in Northwest Missouri. There was some indication these practitioner recommendations could provide some benefit and can

be transferred to settings beyond Northwest Missouri and rural school districts. Further, the scholarly recommendations were areas for which themes did not emerge consistently in the data but were indicators of potential areas of further research which may result in novel findings in relation to this study.

Recommendations for the Practitioner

Several recommendations for practitioners arose from this study. Participants indicated they did not use any formal means for evaluating the success of their novice teacher induction programs, although many felt evaluations were important components of the program when asked. Several administrators indicated time limitations as a factor in deciding not to conduct an evaluation of the novice teacher induction practices. Considering the lack of such a tool, the design of a formal evaluation tool used to evaluate the districts' induction practices would support the use of data-driven decision making [57] regarding the program and could provide insight into the school district's novice teacher retention. The tool could be a survey, an interview with the novice teacher, a novice teacher self-assessment, or some combination thereof, and would serve as the basis for making decisions regarding the needs of the novice teacher and the program.

Next, rather than making decisions based on intuition, previous experiences, or beliefs and values as evidenced by the informal role which occurred in the data of this study, administrators should consider reviewing literature surrounding successful induction programs and practices, to guide future decision making. As recommended by Kaufman [14], administrators should revisit high quality program standards for novice teacher induction. Additionally, Cherian and Daniel [63] found the leader was vital in creating organization and structural contexts for strategy, implementation, and adaptation of the novice teacher induction process. Furthermore, there are implications based on the administrators' responses in the data collected within this study indicating the administrator's role in novice teacher induction is not addressed and embedded with fidelity into administrator coursework and should be considered as recommendation for adoption and review within educator preparation programs [25].

Lastly, practitioners would benefit from designing formal activities and other programming, in addition to, collecting evidence surrounding the administrator's proclaimed informal role of "eliminating stress" of the novice teacher to align beliefs and values to actionable items. While many practitioners claimed their goal was to support novice teachers to make them want to stay in the district, few participants had formal means for addressing this goal. Actionable and planned items did not exist to purposefully work to eliminate stress for the novice teacher. Many of their roles assumed by the practitioner were informal to address the stress and overwhelmed feeling they believed existed within their novice, however, there were no formal efforts to do so. By familiarizing themselves and utilizing recommendations from previous research, practitioners could further support the novice teachers' fulfillment and confidence [10,11] and to help to create in them a sense of belonging within their new district [18] in a more formal and

intentional way.

Recommendations for the Scholar

In addition to the practitioner recommendations, scholarly recommendations evolved from this study. Administrators were reflective on their own behaviors and shortcomings throughout the study indicating a desire to do better, do more, and continue to grow as a leader. While this notion of growth mindedness [64] did not influence the findings and translate into an additional theme, future scholars should consider investigation into how administrators transferred their own cultures of growth mindedness [64] to new teachers during the novice teacher induction processes in K-12 public, rural school districts.

Similarly, throughout the study administrators referenced the desire to help novice teachers acclimate to their school district by informally modeling the school districts' beliefs through their own behavior. Furthermore, administrators felt duty towards helping the novice teacher adopt the school culture, to "fit in" by establishing within the novice teacher a sense of belonging within the school district [18], but there was a lack of formal means for addressing the novice teachers' sense of belonging. To address a gap in the current literature, further investigation is needed into how the administrator's modeled behavior and their formal role supports the novice teachers' social identity and sense of belonging during the novice teacher induction process in K-12 public, rural school districts.

Finally, because administrator did not use formal tools for evaluating their novice teacher induction programs, Newcomer et al.'s [57] recommendations for using data to make decisions when conducting program evaluations, further investigation around the efforts and tools currently available to administrators and other practitioners which can be used for formal evaluation of the novice teacher induction process in K-12 public, rural school districts is recommended. If such tools for evaluating novice teacher induction exists, administrators would be more able to readily adopt and apply these tools to assist in evaluating and making changes and decisions to better support novice teachers within their K-12 public, rural school districts.

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Tamara Lynn is an assistant professor in the School of Education at Northwest Missouri State University. Her research and teaching interests are in the area Novice Teacher Induction, Collaborative Scholarly Writing, Educator Preparation, Transition Services, Stakeholder Collaboration & Teams, Professional Development, and Autism Consultation.

Conflict of Interest

This research did not receive any specific funding from agencies in the public, commercial, or not-for profit sectors.

This submission has not been published elsewhere, is not presently under review elsewhere, and will not be submitted elsewhere while under review for IJER.

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