Lessons from an Urban Teacher Residency Partnership

Nancy Morris¹ and Leighann S. Forbes²

¹ Assistant Professor, School of Education, Gannon University, ² Associate Professor, School of Education, Gannon University

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Abstract

Facing teacher shortages, urban teacher frustration, and a lack of BIPOC representation in the teacher workforce, two urban institutions, a school district, and a university partnered to design, develop and implement a year-long clinical teacher residency program. Throughout the pilot and one subsequent year, data was collected through observation and open-ended questionnaires as three resident-mentor pairs engaged with students in two of the district's elementary schools. The Technological, Pedagogical, and Content Knowledge (TPACK) development model (Mishra & Koehler, 2006) and Moir's (1990) Phases of First-Year Teachers' Attitudes Toward Teaching were used to inform program design and examine the success of program implementation. While the program did not meet the goal of increasing BIPOC representation, teachers skilled in urban education successfully entered the workforce. Valuable lessons were learned about designing residency programs that foster a sense of belonging and optimize mentor and resident development. The authors conclude clinical teacher residency shows promise as an avenue for providing novice and experienced teachers responsive support as they engage with the complex process of teacher development.

Keywords: teacher residency, urban education, partnership, BIPOC

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Introduction

Publications in the United States frequently sound an alarm about the increasing difficulty recruiting teachers and the dwindling representation of BIPOC and other marginalized populations in the teacher workforce (Shaw-Amoah et al., 2020; Turner, 2022; Young et al., 2022). For example, a report released by the National Center for Education Statistics in 2017 revealed this decline across the United States (McFarland et al., 2017). The report also documents an enrollment decline in traditional undergraduate programs, an increase in graduate enrollments, and changes in the racial/ethnic composition of PK-12 public schools and the number of students eligible for special education services (McFarland et al., 2017). In response, some call for investigations of racial and cultural differences as factors related to attracting and retaining teachers, especially BIPOC teachers, to urban and underperforming schools (French, 2018; Young et al., 2022). Others call for teacher preparation programs to intentionally design systems for monitoring and supporting the development of teachers, particularly when they transition from teacher candidate to teacher of record (French, 2018, p. 15).

Gannon University is situated in the poorest zip code in the United States and has seen a decline in teacher preparation enrollment as well as representation of marginalized populations (Forbes, 2019, 2021). Erie's Public Schools have also seen a mismatch between students and teachers (Gould, 2019). To combat the situation, Gannon University and Erie's Public Schools, two urban institutions with a long-standing partnership focused on improving educational opportunities for the community, agreed to investigate solutions that might mitigate shortage and representation issues. During their investigation, representatives from the partnership learned about the yearlong Clinical Teacher Residency Program (CTRP) model. They decided to examine this approach to improve the teacher pipeline. A team of representatives from each institution was assembled to research CTRPs and, based on initial research, the team determined that a CTRP could offer many benefits to both the district and the university (Heck & Bacharach, 2015/2016). Gannon University has consistently provided diverse certification programs requiring extensive field experience before student teaching. Using this foundation, the team began envisioning a CTRP to support teacher candidates through a year-long experience connected to a single classroom instead of field placements at one or more sites, followed by a semester-long student teaching experience at another. This extended experience appeared effective in urban CTRPs throughout the United States. Research revealed that such a program would need to have a dual

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focus on the interests of both parties, the school district and the university, through targeted support for teacher candidates and their mentor teachers to realize the greatest benefit (Young et al., 2022).

During the project's research phase, Research for Action, a nonprofit education research organization, released a policy brief specific to the teacher pipeline in Pennsylvania (Stohr et al., 2018). The paper called for innovative strategies targeting the "leaky pipeline" in Pennsylvania. According to Carver-Thomas and Darling-Hammond (2017), quality residency experiences are effective in urban districts with high teacher turnover and have been shown to increase teacher retention. The Pennsylvania Department of Education (PDE), aware of this research finding, also investigated strategies for recruiting and retaining teachers, particularly those who would increase BIPOC representation in the teacher workforce. PDE subsequently announced the Innovative Teacher and Principal Residency (ITPR) grant program with a goal of developing a pipeline of professionals well prepared for employment in urban environments and representative of the BIPOC population in urban centers across Pennsylvania. The Gannon University-Erie's Public Schools team formalized their commitment to designing a teacher residency program and submitted a proposal. After being awarded a \$75,000 planning grant, the Gannon University-Erie's Public Schools Clinical Teacher Residency Program (GU-EPS CTRP) was developed. Due to the COVID-19 pandemic, PDE did not offer anticipated funds to implement the GU-EPS CTRP. The team was, however, permitted to use funds remaining from the planning grant to support the pilot year of implementation. The GU-EPS CTRP, targeting BIPOC and other marginalized populations, was designed to support residents and their mentor teachers holistically through coursework, supervision, and professional development. The program was implemented in the 2020 fall semester alongside masking, social distancing, and remote instruction. During the implementation phase, the team sought to determine whether the program effectively supported residents and their mentor teachers.

Review of Literature

In 2019, the Pennsylvania Department of Education (PDE) opened the door for obtaining grant funds through the *Innovative Teacher and Principal Residency Grant Program*. The grant program called for creating innovative programs, like a clinical teacher residency, to increase the pipeline of well-prepared candidates and included an emphasis on diversifying the BIPOC teacher workforce. The preexisting partnership between university and school district provided the foundation for a successful grant application, written collaboratively by representatives from both institutions, and provided a shared focus on increased enrollment in teacher preparation, increased retention in the teacher workforce, and diversification of representation in both institutions. The literature review revealed several important considerations for supporting teacher development over a year-long residency. As suggested by Young and colleagues (2022),

results of the literature review were shared with all members of the design and development teams to keep all members of the partnership well-informed.

Preexisting Supports

Prior to developing the residency program, the team evaluated current resources to determine what support was already in place. This review discovered preexisting services and financial support for teacher candidates. First, students graduating from a high school in Erie's Public Schools and immediately enrolling in Gannon's teacher preparation program are eligible to receive the Archbishop Gannon Scholars full tuition scholarship. This scholarship supports the entirety of an undergraduate's academic program, defraying the cost of completing a four-year degree program. Second, undergraduate students may be eligible for Gannon's Diversity and Service Leadership Award, a financial award for BIPOC high school students planning to attend Gannon full-time. In addition to financial support provided by the university, students who plan to enter the residency program are provided with assistance applying for the federal TEACH grant, which provides a tuition assistance program. Faculty also provide teacher candidates with assistance obtaining fee waivers for certification tests. Finally, teacher candidates can receive payment for substitute teaching outside of the university semester. These preexisting supports meet the Pennsylvania Educator Diversity Consortium (PEDC) recommendation for reducing the cost for teacher preparation programs (2022) and allowed the partnership to quickly move forward with designing a year-long residency program culminating in a Pennsylvania Instructional I certificate.

Elements of Effective Clinical Teacher Residency Programs

The planning team identified three areas requiring a review of research to support program planning. These areas were broadly defined, and teams proceeded to develop components of the CTRP based on research recommendations. The three areas encompassed curriculum design, design of the mentoring component, and effective marketing strategies. Unfortunately, the working group responsible for marketing the residency program was not able to fully develop a marketing plan. This was primarily due to the shift of marketing and communication to messaging about the COVID-19 pandemic.

Curriculum Design Research

Reviewing the literature on CTRPs, it was ascertained that residency programs intentionally provided traditional instruction paired with on-the-job practice to develop the teacher's knowledge base and ability to put theory into practice. Literature guiding curriculum design was aligned with Shulman's (1987) description of the fundamental elements of the teacher knowledge base. He described the development of teacher expertise as dependent on

development of both Pedagogical Knowledge (PK) and Content Knowledge (CK). A high level of teacher expertise results from expertise in PC, CK, and a unique form of knowledge called Pedagogical Content Knowledge (PCK). He noted that PK and CK develop independently and together to impact the development of PCK. However, because the development of PK and CK does not necessarily occur simultaneously, PCK develops unevenly. This framework has subsequently been used to guide teacher preparation curriculum and programming for in-service teachers, emphasizing the development of PK and CK (Young et al., 2022).

To assess teacher knowledge development, literature on teacher performance assessment was consulted. The review found that nearly a decade later, Danielson (1996) enhanced Shulman's PCK framework by developing criteria for observing and measuring the development of teacher knowledge. In Pennsylvania, Danielson's *Framework for Teaching* (1996, 2008) was adapted to create a statewide tool for evaluating student teachers and residents. Known as *Form 430 Pennsylvania Statewide Evaluation Form for Student Professional Knowledge and Practice* (PDE 430), this evaluation is used a minimum of two times during the culminating classroom experience to recognize the developmental nature of the multiple types of teacher knowledge (Pennsylvania Department of Education, 2003). In addition, this form requires feedback from university supervisors at multiple points throughout clinical placements. Institutions use the PDE 430, or a modified version, to collect evaluation input from classroom cooperating teachers and, in some cases, self-assessment and reflection data from teacher candidates.

An expansion of PCK was later suggested by Pierson (2001) and championed by Mishra and Koehler (2006). These authors suggested PCK should be broadened to recognize Technological Knowledge (TK), a form of teacher knowledge focused on using technologies to meet instructional goals. According to these scholars, TK develops independently and alongside other elements of Shulman's model to form Technological Pedagogical Content Knowledge (TPACK), a highly specialized type of knowledge. This type of teacher knowledge develops as teachers increase knowledge, skills, and attitudes toward instructional technology, teaching practices, and disciplinary content.

Mentoring Design Research

While many studies of mentoring programs focus on professional development topics and delivery modes (Feaster, 2020; Slovik, 2012; Stansbury & Zimmerman, 2000; Warsame & Valles, 2018), Varney (2009) suggested a humanistic approach to the task of mentoring is more important than mentoring topics or delivery modes. According to the literature, this approach is responsive and allows flexibility based on individual needs (Varney, 2009; Young et al., 2022). Aguilar (2018) conducted a further study on emotional resilience in educators and similarly suggested the importance of flexible support structures in the development of educators. Moir (1990, 1999) suggested novice teachers experience six phases over the course of their first year.

According to Moir's model, novice teachers experience emotional turmoil as they move from a high of anticipation in August and September to an emotional low in November and December and then back to an emotional high as the state of anticipation returns in May and June (Paulsen et al., 2015). Research has confirmed these stages are experienced by teacher candidates and student teachers as well as first-year teachers (Paulsen et al., 2015; Young et al., 2022).

This initial review of literature suggested mentoring needs would change throughout the GU-EPS CTRP year-long experience yet follow a predictable model, allowing for the identification of mentoring supports across the continuum of development (Losser & Leavitt, 2013; Moir, 1990, 1999). A deeper dive into the literature revealed potential topics for use in the design of the mentoring component of the CTRP. According to several studies, residents and mentors would be equally well served by developing communication skills such as feedback (Reilly, 2015/2016; Schlacter, 2013; Wiggins, 2012) and reflective practice (Conderman et al., 2014; Rieger et al., 2013). Additional topics noted in research findings included growth mindset (McMinn, 2019), Universal Design for Learning (Delisio, 2018), and coteaching (Conderman & Bresnahan, 2007). Studies of mentoring programs further advocated developing mentor-teacher coaching skills (Knight, 2011; Podsen & Denmark, 2013; Zugelder, 2019). This need was echoed by the school district strategic plan, which called for shared leadership (Erie's Public Schools, 2018).

Although much of the literature is related to teacher knowledge and skill development, a smaller number of studies examined the mode of professional development delivery. Several described the use of structured mentoring modules, provided either online or in person (Clark & Goebel, 2007; Dooley et al., 2012; Louisiana Department of Education, 2018; NYU Steinhardt School of Culture, Education, and Human Development, 2019; Ohio Department of Education, n.d). While the importance of professional development for mentors and residents in CTRPs was suggested in multiple publications, professional development during teacher residency has not been thoroughly studied (Duval County Public Schools, 2020; Guha et al., 2016; Dooley et al., 2012; Torrez & Krebs, 2019).

Theoretical Framework

As revealed through the literature review, teacher preparation programs must provide support as teacher candidates transition to teacher of record. This requires an extended mentoring period as new teachers develop their professional knowledge base and pass through the stages of emotional development typically associated with the first year of full-time teaching. In addition, it was expected that professional growth would occur for mentors, both overtly through professional development sessions and covertly through the expansion of their professional learning network to include Gannon's teacher educators as well as previously unfamiliar district administrators and other mentor teachers. French (2018). This approach fits well with Erie's

Public Schools strategic plan, which includes a section focused on *Teacher Development & Efficacy* (Erie's Public Schools, 2018).

The theoretical framework used for this study guided development, implementation, and evaluation of the GU-EPS CTRP. The framework acknowledged three elements: the developmental nature of the teacher knowledge base as described by the PCK and TPACK frameworks (Mishra & Koehler, 2006; Shulman, 1987), the developmental trajectory described by the Phases of First-Year Teachers' Attitudes Toward Teaching model (Moir, 1990, 1999), and the need for a humanistic approach when supporting new teacher development (Varney, 2009; Young et al., 2022; Aguilar, 2018). With these frameworks as guidance, the curriculum for the CTRP and professional development programming were designed.

Methodology

Context of the Study

Located in Pennsylvania's fourth largest city, Erie's Public Schools serves approximately 11,500 students across the 15 public schools encompassed in the district (Erie's Public Schools, n.d.). According to a Jefferson Educational Society report for 2019-2020, the district has a mismatch between the percentage of BIPOC teachers (4%) and BIPOC students (61%) (Gould, 2021). Research for Action reports that this situation mirrors the numbers across Pennsylvania, where there are "109,102 students of color and 521,442 White students enrolled in PA schools that have zero teachers of color" (Shaw-Amoah et al., 2020, p. 11). Many students in this urban setting are economically disadvantaged (74.3%), eligible for special education services (17.6%), or nonnative speakers of English (8.3%) (Erie's Public Schools, 2018). The district has been a reliable partner to Gannon's teacher preparation programs and, on average, accepts 40 students for field and student teaching placements each year. With the publication of the 2018-2024 strategic plan for Erie's Public Schools (EPS), the district made a commitment to recruit high-quality teachers and increase BIPOC representation in the teacher workforce.

Participants

In the fall of 2020, two female undergraduate teacher candidates enrolled in the pilot year of the GU-EPS CTRP. The candidates were traditional undergraduates, and each had completed three years of a Pennsylvania Instructional I certification program as dual majors in PK-4 Early Childhood Education and PK-12 Special Education. The candidates were each assigned a mentor in one of the district elementary schools. The mentors were both female and possessed prior experience with urban elementary students. Students in both elementary classrooms exhibited a variety of needs. After determining suitable placements and mentor pairs, the pilot year of the residency program commenced in the 2020-2021 academic year. Grant funds provided each

mentor with a \$1,200 stipend, reimbursed the expenses of the university supervisor and defrayed the cost of a professional development coordinator.

Program Design

The planning team, composed of faculty, teacher candidates, and administrators from both entities contributed equally to the development of the GU-EPS CTRP. The literature review was supplemented by the expertise of university faculty alongside the wisdom of practice among teacher candidates and EPS teachers. Higher education faculty and administration could use their skills in program design, assessment, and supervision, while school district personnel provided expertise in mentoring, induction, and successful practices in urban environments. In the spring 2020 semester, planning temporarily halted as the COVID-19 pandemic shifted education to the various modes of remote instruction. Upon resuming program design, the curriculum working group created residency programs leading to initial certification for undergraduate, postbaccalaureate, and graduate students. For undergraduate and post-baccalaureate students, preexisting educator preparation programs were revised to accommodate creating an urban education course. This course was added to support residents as they developed knowledge of urban learners and investigated effective pedagogical approaches.

Regardless of the type of residency program, each was designed to accommodate two developmental stages during which candidates experience the high-to-low emotional trajectory followed by the low-to-high emotional trajectory. In Residency I, a fall semester experience, residents are enrolled in the urban education course while simultaneously engaged with their mentor teacher in authentic classroom experiences. Residents are active in the classroom on a full-time basis (i.e., no less than 40 hours per week) as they observe and follow the lead of their mentor by planning, providing small group and individual interventions, coteaching, and grading during and outside of the school day. Throughout Residency I, residents explicitly work on developing general and content-specific pedagogy. Throughout this experience, residents and mentors meet at least three days a week from August to December for communication, feedback, and planning for success. These meetings increase to five days a week during Residency II, which runs from January through April. During this phase, the resident is no longer enrolled in a concurrent course and, instead, is present at the school site and follows the mentor's schedule, gradually taking on the mentor teacher's responsibilities to become the lead teacher in the classroom. In addition, the resident attends a required evening seminar course without the mentor teacher during Residency II. This culminating experience facilitates the transition from resident to competent and caring professional educator.

Residency I and II begin after mandatory orientation sessions in August and January. The mentor teacher attends the August session and emphasizes community building through education and engagement activities. The January session is attended by residents alone and emphasizes greater

release of responsibilities and improvement in knowledge and skill assessments. Upon completing the residency program, residents may perform as substitute teachers during May and June, and unless unanticipated circumstances arise, residents expect to receive an offer for fulltime employment from the district for the year following residency. The GU-EPS CTRP has been designed to include continued mentoring and professional development throughout Residency I and II. In addition, the program calls for a continuation of support through the district induction program, known as the Urban Institute, required of all new teachers during their first years of employment.

Developing the Teacher Knowledge Base

The GU-EPS CTRP, built on preexisting programs of study, built CK through content-specific coursework and PK through a combination of coursework and scaffolded field experiences. While some TK had been developed during the preparation program, it was expected that residents would learn district-specific technologies through hands-on experiences using the technologies. During Residency I and II, monthly professional development sessions were provided to further support development of the teacher knowledge base. Throughout the year-long residency, mentor teachers were provided with supplemental professional development to enhance their leadership and prevent teacher attrition.

Supporting Emotional Development

The team designing the mentoring and professional development component of the GU-EPS CTRP identified a coordinator of professional development activities to create a cohesive, shared experience. For mentor teachers, the experience included professional development in tandem with residents as well as individual sessions to strengthen their personal ability to support residents and adopt innovative approaches in professional practice. Mentors were expected to devote a significant amount of time and energy to developing coaching skills, engaging with residents, and attending professional development sessions, often going beyond expectations for a traditional cooperating teacher. In addition, professional development topics were selected based on the developmental stages expected in the year-long residency (Moir. 1990, 1999) and the work of Losser and Leavitt (2013), who further identified types of support appropriate for each stage. Although the topics were selected, the professional development sessions addressed them "as needed," based on input from the mentor teachers, residents, and university supervisor.

The work of the mentor teachers called for engagement with residents during summer professional development sessions, where they began the critical process of relationship building. Summer orientation served as a mechanism for establishing a shared understanding of roles, responsibilities, and timelines for mentors, residents, school administration, and university faculty. Monthly professional development sessions provided an opportunity for ongoing support

for both mentors and residents. Although topics, strategies, and training dates were identified, the professional development program used a responsive approach, selecting topics from the menu of options depending on mentor and resident needs. These sessions consistently began with time for discussion of emotions and ended with reflection as a way of gauging emotional state. Between monthly sessions, the school district included residents in both instructional and non-instructional duties of the teaching staff and welcomed them to in-service workshops and trainings throughout the year-long residency. In addition, mentors were provided with Podsen and Denmark's (2013) *Coaching & Mentoring First-Year and Student Teachers* to support development of coaching skills. Specific chapters were selected for mentors to read and implement throughout the residency. Likewise, residents were provided *The Beginning Teacher's Field Guide: Embarking on Your First Years* by Boogren (2018) for use throughout the year under the guidance of the professional development coordinator. Mentoring sessions, therefore, provided intentional attention to the experiences and emotions of residents and mentors as individuals and to resident-mentor pairs throughout the residency.

Data Collection and Analysis

Due to the small number of participants in the pilot study, data were collected from multiple sources to better understand the factors contributing to the success or failure of the residency program. Qualitative data were collected through observations, open-ended questionnaires, interviews of residents and mentors, and narrative feedback from performance evaluations. Quantitative data was collected in the form of licensure exam scores and performance ratings. This mixed methods approach allowed analysis of participants' experiences and achievements as they transitioned from teacher candidates to fully credentialled teachers. Instruments used for collecting data are described in Table 1, which includes when each instrument was deployed, the type of data collected and from whom, and the source of each instrument.

Data collection points aligned with the expected development stages, as Moir (1990) outlined. The first collection point was in August, before the start of the GU-EPS CTRP, and the last was in May, at the end of the program. Additional data were collected by the professional development coordinator each month and by the university supervisor every two weeks. The university supervisor collected observational data through observations and the PDE 430 form, which was used at the midpoint of Residency I, the midpoint of Residency II, and the end of Residency II. The professional development coordinator used a worksheet from Do2Learn.com (2010) to prompt, recognize, and categorize emotional language used by mentors and residents at the beginning and end of each monthly mentoring session. Text from all qualitative data sources was compiled, coded, and examined to identify themes about the GU-EPS CTRP implementation. In addition, the School of Education director provided the team with scores from each resident's portfolio presentation and their licensure exam attempts. Scores were used

to assess resident success or failure with university and state-required assessments of the teacher knowledge base, not degrees of success.

Instrument	Deployment	Qualitative or Quantitative	Туре	Target	Source
Development plan	Pre-residency and transition from Residency I to Residency II	Qualitative	Narrative response from residents	Resident	Boogren, 2018
Supervisor Observation	Every two weeks	Qualitative	Narrative response from university supervisor	Resident Mentor	Supervisor record
Professional Development Coordinator Observation	Once monthly	Qualitative	Narrative response from professional development coordinator	Resident Mentor	Professional development coordinator record*
PDE 430	Once in Residency I Twice in Residency II	Qualitative	Narrative entries from university supervisor	Resident	PDE, 2003
Exit interview	Post-residency	Qualitative	Interview with School of Education director	Resident	GU School of Education
Exit questionnaire	Post-residency	Qualitative	Narrative response to questionnaire from university supervisor	Mentor	GU School of Education
Portfolio score	Post-residency	Quantitative	Rating from School of	Resident	GU School of Education

			Education director		
Instrument	Deployment	Qualitative or	Туре	Target	Source
		Quantitative			
Licensure exams	Post-residency	Quantitative	Achievement score from electronic assessment system	Resident	PECT
PDE 430	Once in Residency I	Quantitative	Rating from university supervisor	Resident	PDE, 2003
	Twice in Residency II				

The professional development coordinator's response was based on a Do2Learn (2010) worksheet and Losser and Leavitt's (2013) extension of the new teacher development model.

Findings

Resident Development

Quantitative data from licensure exam scores revealed residents were proficient in the PCK required of both early education and special education teachers in the state of Pennsylvania as both residents passed the exams on their first attempt. This result is supported by ratings on the PDE 430, which also indicated residents were proficient in PCK. Although TK is a component of the PDE 430 form, it is not a stand-alone score which can be easily used to determine proficiency. Instead, the technology sub-score on the exit portfolio was reviewed. This measure showed proficient performance by each resident in the domain of TK. These findings were supported by qualitative data collected from both residents and mentors.

Mentor Development

Mentor development was assessed using only qualitative data. According to data analysis, mentors were less likely to explicitly identify growth in their professional knowledge, skills, and attitudes and unlikely to attribute growth to the professional development curriculum. Neither mentor teacher reported advancement in their professional CK or PK. This was somewhat expected based on French's (2018) finding that mentors may not be aware of their changes, even

though changes have occurred. Using data beyond the self-reports showed that mentors and residents frequently remarked upon pedagogical issues as they transitioned to remote learning and later to hybrid learning, all while under COVID-19 restrictions. These discussions frequently resulted in problem-solving and adoption of new pedagogical strategies.

Similarly, although only one mentor teacher recognized a shift in TK, qualitative data analysis revealed that both demonstrated growth in TK as they shared strategies for using the Zoom and Schoology platforms for remote instruction. Observations from monthly mentoring sessions documented continuous sharing of instruction and management tools and techniques as mentors and residents improved their TK. Based on this comprehensive data analysis, professional development programming contributed to new PK and TK development among mentor teachers.

Implementation of Differentiated Supports

Data collection about Implementation of the mentoring program took place throughout the yearlong experience and was assessed using qualitative means. Data analysis examined the impact of professional development supports with the stages of new teacher development (Moir, 1990). Findings from the pilot year of the GU-EPS CTRP revealed three primary themes. First, participants expressed a deep sense of belonging to the professional learning community created by the residency program. Second, the year-long experience was highly valued by participants. Third, participants benefitted from the ability to seek just-in-time support from the learning community during coursework and professional development. Data analysis further revealed that the anticipated series of developmental stages was impacted by the school district's decision to change instructional modes in the middle of the school year. Mentors and residents began the semester by providing remote instruction to all learners. In this mode, participants went through the stages of anticipation, survival, and disillusionment. In the second half of the school year, the school district switched to hybrid instruction where some students were in person, and some were remote. Due to this change in mode, participants moved through the three phases again, although more quickly, and then progressed to rejuvenation and reflection. Under these unfamiliar modes of instruction, mentors experienced the development stages alongside residents as they collaborated to adopt these new forms of instruction under COVID restrictions.

Sense of Belonging

By the end of the year-long experience, residents and mentors felt connected to their schools, the district, and the teaching profession. Each participant, in their way, repeated the importance of residency in generating a sense of belonging. This sense of belonging was important as it directly influenced the "resident's ability to engage in reflective practice and move from novice to expert in various domains of the teaching profession" (Marshall et al., 2020, p. 1). Mentors frequently expressed pride in the growth and development of the residents, not just as classroom teachers,

but in their status as members of the school instructional team. One of the mentors recognized her impact on the developing resident stating, "The experience of having a teacher resident with me was very valuable. I enjoyed being a cooperating teacher and mentoring my resident through the year, watching her grow as a teacher." Interactions resulted in sharing procedures and strategies among participants and supported mentor's understanding of their importance within the district. Likewise, residents grew in their connection to the district, although they recognized differences in school culture between buildings. Participants expressed this sense of belonging to a professional learning community individually and together. Social and emotional support appeared equally important to mentor teachers and residents. This theme echoes French's (2018) finding that social interactions are critical in changing the knowledge and behaviors of both novices and their more experienced counterparts.

Value of Year-Long Growth and Development

A second theme emerged around the value of the year-long residency experience. Participants highly valued the extended experience in supporting the development of knowledge, skills, and attitudes necessary to successfully navigate an entire school year. As one of the residents noted, "I really benefited greatly from being an integral part of the classroom from beginning to end of the school year." Another resident expanded on this thought, saying she "felt more prepared to enter the teaching profession than if I had completed a traditional student teaching experience." The extended period of feedback and guidance provided extra time "on the job" for residents to learn the nuances of every moment of the school year and the many technologies used in the district and develop an understanding of the scope and sequence of the curriculum. These findings echo research findings about the benefits of increasing the length of student teaching to increase student-teacher preparedness levels (Ronfeldt et al., 2020).

Mentors also interacted during professional development sessions and grew in their understanding of how district initiatives were implemented differently from building to building. Throughout the year, they shared information about school-level implementation of initiatives and engaged in brainstorming to support each other and the residents. In this way, they engaged in curriculum leadership roles. Although mentors didn't always recognize their growth and development, mentor development was recognized in the themes extracted from the data. Finally, while extended time did not create a successful program alone, the extended time frame was a significant support in the growth and development of all participants.

Responsive Support

The final theme to emerge was a desire among participants for responsive support. The GU-EPS CTRP anticipated this need and was intentionally designed to be responsive to participants. Seminar courses during both Residency I and II allowed time for discussion based on questions

from residents. One of the residents specifically commented, "Having the Urban Education Seminar was also helpful to discuss issues we saw in the classroom." She valued opportunities to connect her classroom experiences to the coursework topics. In addition, the residency program allotted time to participant concerns and "on-demand" needs during each monthly mentoring session. Early in the CTRP, participants requested assistance navigating Zoom and Schoology platforms, creating structure within the remote environment, and monitoring student attendance. As the school year progressed, participants transitioned to seeking solutions about challenges faced in the technology platforms, innovative ways to deliver instruction, and strategies for managing student engagement and groupings. Near the end of the residency, discussions moved away from technologies and centered on district-wide programs for math and reading and implementation in hybrid environments.

Additionally, feedback to the university, the school site and district, the residency supervisor, and the professional development coordinator, throughout the residency period, ensured the process was continually improving and responsive to the voices of participants and stakeholders. Using evaluative thinking and reflection throughout the pilot year of residency was one of the hallmarks of its success (Earl & Timperley, 2015). Monitoring feedback continuously allowed program leaders to recognize issues early on and quickly find solutions. This ability to solve problems was critical during the implementation of this new and innovative program and prevented frustration, failure, and potentially unsuccessful subsequent years.

Lessons Learned

Gannon University and Erie's Public Schools agreed to investigate a clinical teacher residency program to mitigate teacher shortage and representation issues while increasing enrollment, diversity, and persistence among teacher candidates enrolled in Gannon's teacher preparation programs. Results showed the GU-EPS CTRP not only strengthened the teacher knowledge base in residents and mentors, it also promoted belonging and persistence through the difficult stages of the new teacher development model. Although a small number of residents were involved in the program, the school district immediately offered employment to each upon completion of the residency. Employment was first offered as substitute teaching positions prior to official certification. Subsequently, both residents were offered full-time, permanent positions with Erie's Public Schools. While one of the residents accepted the offer, the other returned to her hometown for a position in an urban classroom.

Developing the Teacher Knowledge Base

The growth and development of participants can best be described as the holistic development of Technological Pedagogical and Content Knowledge (TPACK) as participants developed integrated knowledge of content, pedagogy, and technology to effectively provide instruction

that met district expectations. The shift in TK due to COVID-19 contributed to this outcome as mentor expertise declined while learning new technologies and instructional approaches. Although CK remained intact, mentors engaged in professional development, research, discussion, and trial-and-error with TK and PK throughout the year. They participated in the professional learning community provided by the residency and developed new knowledge alongside the residents. Residents, themselves, developed all areas of the teacher knowledge base.

Although mentors did not recognize their growth, their teaching repertoire increased as they adopted new teaching strategies demonstrated by residents and adopted them based on strategies demonstrated in professional development and residents. Professional development sessions were customized to meet the needs of residents and mentors. Sessions impacted development, especially in areas of technology and pedagogy. The monthly sessions supported growth while other teachers grew frustrated, stagnated, and burned out as they, too, experienced a gap in technology and pedagogy without additional support.

The pandemic similarly impacted resident development. However, the social support and guidance provided by the university supervisor and professional development coordinator allowed them to take risks more easily than their mentors, likely due to preexisting trust. In addition, their ability to quickly establish themselves as active learning community members accelerated rapport with the mentor teachers. In this way, the residency reduced residents' anxiety in the role of teacher and strengthened their confidence in pursuing a career in an urban setting.

Role Distinction

Prior studies suggest resident success relies upon mentor effectiveness, relationship building, and social interactions (Goldhaber et al., 2018; Young et al., 2022). However, at the height of the COVID-19 pandemic, the residency program could not implement the protocol for creating a pool of mentor applicants who could be interviewed, observed, and ranked in these areas. In lieu of the formal application procedure, mentors were strategically and specifically chosen by the assistant superintendent and director of the School of Education. The selection was based on years of experience, teacher effectiveness ratings, sustained excellence in classroom performance, and prior performance as cooperating teachers. Thus, they were assigned residents in the same manner that cooperating teachers are assigned, student teachers. The roles and responsibilities of residents, mentors, administrators, supervisors, and the professional development coordinator were outlined in the *GU-EPS Clinical Teacher Residency Handbook*. This document was designed to provide a shared understanding of the residency program. It was reviewed with participants during the summer pre-residency orientation. According to the document, mentors were selected based on an application, interview, and observation procedure.

The change in mentor selection may have impacted the mentor's understanding of the role as distinctly different from that of cooperating teacher. Mentors viewed the shared professional development requirements as unnecessary for them. They continued to refer to residents as student teachers, even though mentors were assigned for a full year and compensated a greater amount than cooperating teachers. This suggests that additional attention to communicating the role of a mentor and how it differs from a cooperating teacher should be shared early on and reinforced throughout the residency. Understanding the mentor's role, responsibilities, and expected development may help future mentors recognize and value their progress as leaders.

Supporting Stages of Development

The emotional check-in conducted at the beginning and end of each professional development session allowed for self-assessment of needs and barriers to success. It also prompted discussion among mentors and residents as they grappled with each stage of development and the emotional, instructional, and logistical needs encountered (Losser & Leavitt, 2013). It also allowed the professional development coordinator to be responsive and devote a portion of the mentoring session to meeting emerging needs each month. The activity helped build a safe space for sharing and fostered a sense of belonging among participants. This level of interaction and engagement created a professional learning community. According to French (2018), behavioral changes are more likely to occur during the survival and disillusionment stages. perception of their preparedness for moving into roles as a teacher of record. The current study suggests a sense of belonging was critical to resident persistence and supported change during difficult times. It also led to less time spent in the survival and disillusionment stages when the mode of instruction changed in the Residency II semester. This suggests the importance of the learning community and sense of belonging prior to challenging times. It also suggests practice prior to difficult times may provide important rehearsal time.

Mode Switching

Due to the unusual conditions created by pandemic teaching restrictions, participants experienced repeated changes in instructional delivery mode or "mode switching." The school district adopted remote instruction at the beginning of the school year. The timeframe for this mode switch provided little time for training either residents or mentors. Midway through the year, the district switched to a hybrid mode of instruction, again with little or no training. Mode switching resulted in mentors becoming learners alongside residents as their TPACK mastery declined even though they maintained CK expertise. Thus, mentors needed assistance with technology and remote instruction strategies throughout the year. As a result of mode switching, both mentors experienced a roller coaster of emotions alongside residents and took equal advantage of the support provided by the CTRP. Although pandemic-induced mode switching was an obstacle, it provided an opportunity for residents to personally experience remote

instruction in the role of teacher and develop TPACK expertise in a way not otherwise possible. In addition, because they experienced survival and disillusionment twice, their development may be enhanced compared to residencies completed during non-pandemic conditions.

Emerging Needs

The professional development program, created with the new teacher development stages in mind, included pre-determined, research-based topics and activities to meet the anticipated needs of participants at each stage. To maintain a responsive program, time was also scheduled to discuss emerging needs. In an interesting twist, however, the pandemic unexpectedly influenced the needs associated with the developmental stages. The pandemic produced a greater need for self-directed conversations, allowing less time for pre-planned developmental activities. In the end, sessions included the anticipated topics, although with less depth, and provided more time for technology support and opportunities to brainstorm about challenges.

In addition, with greater needs for development in areas not previously anticipated, residents and mentors moved from the excited anticipation stage to survival mode and on to disillusionment more quickly than anticipated (Moir, 1990, 1999). Residency I became an exercise in taking risks, getting comfortable tackling new challenges, and "failing forward" (Maxwell, 2007). Both mentors and residents spent a great deal of time in disillusionment as they grappled with the rapid learning necessitated during pandemic teaching. The responsive approach to development needs successfully supported the persistence of residents and mentors during the repeated disillusionment stages produced by mode switching. Responsive became the operative word for the pilot year of residency, as it did for all educators during the initial year of COVID-19 instruction. Participants in the pilot year had to pivot, be flexible, and accept change.

As mentors and residents became acclimated to their "new normal," residents assumed greater responsibility than originally planned as they provided coaching in remote instruction to their mentors and building colleagues. In many ways, the emerging needs produced by the pandemic allowed residents to mentor their mentors. This was another unanticipated opportunity provided by the COVID-19 pandemic. Late in Residency II, residents finally entered the rejuvenation stage near the end of the residency year. During this stage, the confidence developed through their pandemic experiences allowed them to anticipate their first teaching positions excitedly.

Conclusion

Residents participating in the pilot year of the CTRP reaffirmed their commitment to urban school environments. The residency program strengthened preparation, promoted a sense of belonging, and provided opportunities for growth and development for both the mentors and residents. Residents felt a sense of community and belonging in their schools and became

invested members of their teams, forming strong relationships with their mentors. They used extensive feedback in the development of their teacher identities and expertise. Although the residency contributed to the increased quality of teachers in urban schools, representation remains an issue. When reviewing the GU-EPS CTRP against the *Pennsylvania Educator Diversity Consortium 2022-23 Policy Agenda* targets (Pennsylvania Educator Diversity Consortium, 2022), however, Gannon appears slightly ahead of other institutions in the collaborative development of a clinical teacher residency program meant to engage and sustain minoritized populations. Based on the success of this partnership, the team is further considering the development of internship and apprentice programs as additional pathways to the profession. These pathways would allow interns and apprentices to "earn while they learn" and can use many of the same structures and supports developed for the residency program.

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