The Teacher Educators' Journal

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A Personal and Professional Refection
Kristien Zenkov, Michelle Lague, Holly Glaser, and Andrew Porter

When we first applied to serve as the editors of *The Teacher Educators' Journal* (TTEJ), we did so as a four-member team—Kristien, a very veteran faculty member at Mason; Mark, an early career professor at Mason; Holly, a Mason PhD candidate in teacher education who would shortly graduate; and Michelle, also a Mason PhD candidate who completed her degree during our three-year editorial term. Andrew – now our full fourth member – was a recent Mason PhD graduate who served as the journal's copy editor. Mark Helmsing has not been able to join us in this good work since the fall of 2022, when he underwent a surgery that resulted in tragic complications; we remain hopeful that his recovery will allow us to work with and spend time with him again in the future.

Mark was typically the member of our team with the grandest vision – not that the rest of us lack for ideas, but as a faculty member and an editor, Mark was always working on the next extraordinary idea, whether that was a new course, a compelling theme for the journal, or a collaboration with colleagues from across our university and beyond. With Mark as a core member of our team at the time of our application for this role, we proposed many intriguing and exciting plans for our three-year service to this journal.; we've been able to follow through on many of these, but we've fallen short with others, in large part because we did not have Mark serving as that inspiration. Somewhat also because of workload – we aimed high – and, also, honestly, because we missed our colleague and friend.

Mark would have appreciated – and we hope one day *will* appreciate – this final issue because he cared about teaching and teacher education as much as anyone any of us have known. While he had vast interests, his heart was built for teaching and helping others to do it well. With this final issue, we hope we are honoring Mark, his passion, and his expansive thinking.

Mark Helmsing

Editors' Welcome
Andrew Porter, Kristien Zenkov, Holly Glaser, Michelle Lague, and Mark Helmsing

For this – the final issue of *The Teacher Educators' Journal* (*TTEJ*) published under our editorship – we sought to explicitly address that most obvious of questions: What is the value and impact of our teacher education programs, structures, and pedagogies? What just a few years ago might have been a question that called for objective analyses of teacher education structures is now a query that is inextricably tied to political tensions and moves. And yet, our objective as editors, scholars, and teacher educators is to attempt to share the most current research insights about teacher education efforts, to study these activities ourselves, and to devise the most meaningful teacher education pedagogies. The authors of the articles in this issue offer a broad set of perspectives on the state of our profession, while offering ideas for new structures and critical lenses on who we are – and who we might better – serve through our programs.

Section One: The "What" of Teaching and Teacher Education

In this issue's opening article, "Examining Lessons Learned During the First Year of a Grow Your Own Teacher Preparation Program," Myers, Massaro, Pollard, Shifflett, Killough and Miller focus on the "what" of teacher education structures. They employ a sociocultural lens to examine the perspectives of the partners involved in implementing a "Grow Your Own" teacher preparation program designed to support non-traditional students while they pursued both a bachelor's degree and teacher licensure. In the second manuscript in this "what" section of this issue ("An Unfair Comparison: The Limited Exercise of Comparing Pathways to Address Teacher Shortages"), Rudder provides an analysis of traditional and alternative teacher preparation programs, offering us insights about how such structures can and cannot be compared.

Section Two: The "Who" of Teaching and Teacher Education

The second section concentrates on the "who" of teacher education and the teaching profession. In "The Unicorn Teacher: Males in Early Elementary and Middle Level Education," Lewis and Hesson analyze quantitative and qualitative data to examine both the barriers for males entering the teaching profession as well as the support structures that enable males to persist in the field. Rahimi, Leckie, and Smith bring us "Diversifying the Teacher Workforce Through a Paid Residency," examining the successes and challenges involved with implementing a teacher residency model co-developed by members of a mid-sized urban school district experiencing high teacher turnover and a mid-sized university working to provide beneficial clinical experiences to their teacher candidates. And in "From the Top of the Class to the Front of a Classroom: Student Perceptions of the Teaching Profession at a Highly Selective Liberal Arts University," Moffa and Sigler employ a self-study research design to investigate students' perceptions of teaching careers as well as the motivations that underpin students' decisions to study education and pursue teacher licensure while attending one small, highly selective liberal arts university.

Section Three: The "How" of Teaching and Teacher Education

The final section of this issue addresses the "how" of teacher preparation and teaching. This section opens with an article entitled "Teacher Candidates' Culturally Responsive Teaching Self-Efficacy and Attributional Development: A Multi-Methods Study," in which Greenlees, Lara, Carrizales, and Beach use explanatory mixed multi-methods design to examine the formation of teacher candidates' culturally responsive teaching self-efficacy as well as attributional beliefs for teaching culturally and linguistically diverse learners. Authors Mattix

Foster, Ramos, Rich, Eisenberg, and Hayes share "Starting with Stories: Leveraging Children's and Adolescent Literature to Teach for Anti-Racist and Global Competence," reflecting upon the results of a project funded by the Longview Foundation Innovation Grant designed to prepare pre- and in-service teachers in developing their understanding of global issues surrounding refugees, immigrants, and racism. And in "Using Concept Maps to Analyze Educators' Conceptions of STEM Education," Simmons uses qualitative thematic analysis to investigate educators' initial conception of STEM education and their roles as STEM educators at the beginning of an online graduate course for in-service teachers. This section concludes with a qualitative study titled: "Alternative Teacher Certification Programs: Post Covid-19 Pandemic – Do Graduates Feel Prepared to Teach in Virginia?" in which Rankin and Brinkman share the results of their qualitative study that investigates the perceptions of teacher preparedness among alternatively certified teachers.

We are thrilled to present these explorations and reflections on the "What," "Who," and "How" of the teaching and teacher education field, all of which illustrate the complexities, challenges, and enormous value of our current programs, structures, and pedagogies.

Examining Lessons Learned During the First Year of a Grow Your Own Teacher Preparation Program

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Abstract

This paper outlines how four community colleges, and a large public university, collaborated to support over 80 paraprofessionals who sought to finish their bachelor's degree and earn licensure. Funding from a statewide "Grow Your Own" initiative allowed the teacher educators at the community colleges and university to put in place structures to support non-traditional students, and each other, during the first year of this program. Lessons learned and next steps are highlighted.

Keywords: grow your own programs, collaboration, teacher shortage

Teacher attrition, led by resignations, retirements, and frustrations exasperated by COVID-19, has led to teacher shortages in many school divisions across the United States. Another factor impacting the teacher shortage is a decline in the number of individuals interested in the profession, as demonstrated by the lower number of students enrolling in teacher preparation programs (American Association of Colleges for Teacher Education, 2022). Furthermore, many experts in education agree that the teacher shortage is heightened in certain

geographic regions, particularly rural and urban school divisions (Jacobs, 2021). Although no one solution is likely to resolve shortages for all school divisions, Grow Your Own (GYO) initiatives have sprung up across the county in order to provide quality teachers to divisions in need.

GYO programs support individuals who want to be teachers and who want to return to their "home" divisions, once they graduate, and teach in local schools. These programs can vary in who is recruited and how they are supported (Muñiz, 2020). Although participants in GYO programs can be traditional college age, many GYO initiatives focus on paraprofessionals who are already employed by the schools and are familiar with the communities and the specific needs of their students. By utilizing local talent, GYO programs can lead to increased positive school climate and meaningful relationships with families.

GYO programs offer affordability, access, and attainment for their participants. This is especially important for future teachers of color. Research shows that teachers of color, regardless of teaching area, are sorely underrepresented (Guarino et al., 2006). Ideally, according to Gist et al. (2019) and others, GYO programs should be committed to increasing racial, ethnic, and linguistic congruence between teachers and student populations. In addition, GYO programs should work to eliminate the barriers related to the recruitment, preparation, and retention of teachers of color.

In rural and urban areas, retention is highest if teaching positions can be filled by members who are from the community. The belief is that teachers who have ties to the community are better able to serve the children of the community. These teachers understand the rural or urban lifestyle and have community ties (Goodpaster et al., 2012). Thus, GYO programs that encourage participants to remain in the community can be an asset to school divisions.

In 2022, the Commonwealth of Virginia provided James Madison University (JMU) with 4.2 million dollars to: 1) address the teacher shortage; and 2) work to diversify the teacher workforce across the state. Since GYO initiatives are widely considered a best practice for recruiting and supporting teachers in underrepresented communities (Wills, 2017), JMU decided to partner with community colleges and use this funding to support non-traditional students who wanted to complete their degree in order to become an inclusive early childhood, elementary, or special education teacher. In return, the participants agreed to teach in their school division for two years once they graduated. The purpose of this study was to answer the following question: What lessons did the teacher educators at the community colleges and university learn during the implementation of a GYO program?

Literature Review

To situate our work, we chose to highlight the research related to the role of paraprofessionals in schools, teacher preparation programs in institutions of higher education, and GYO program initiatives in education.

Role of Paraprofessionals in Schools

Over time, the role of paraprofessionals has evolved from helping teachers with clerical tasks to providing direct support and instruction to students (Martin, 2009). According to the U.S. Department of Education (2004), paraprofessionals by definition are school employees who: (a) provide one-on-one tutoring; (b) assist with classroom management; (c) coordinate trainings and staff development; (d) conduct parental involvement activities; and (e) provide instructional support services under the direct supervision of a highly qualified teacher.

Paraprofessionals today play a critical role in schools across the United States. Whether in a general or special education classroom, they work to ensure all students can access academic

success regardless of background or ability level (Martin, 2009). As essential members of the education team, their roles and responsibilities vary depending on the needs of each particular school. The education of paraprofessionals can range from not finishing high school to holding a master's degree. Despite this wide range of "school learning" the paraprofessionals know the schools, students, and what is expected out of an effective teacher (Delgado et al., 2021).

In Virginia, where this initiative took place, there are currently over 3,500 unfilled teacher positions which is an average of 26 openings per public school division (Povich, 2023). Furthermore, open teaching positions are seeing much lower applicants than in previous years (Camera, 2022). One way that many divisions across the United States are working to address this teacher shortage is to utilize the paraprofessionals they already employ. Furthermore, because many paraprofessionals come from diverse backgrounds and experiences, there is a wealth of practices, cultures, and histories from which they can draw from while working with students (Johnson & Lehner, 2021). In fact, Villegas and Davis (2007) argue that teacher diversity could be increased by supporting paraprofessionals in becoming teachers. This could lead to classroom teachers better reflecting the student population both racially and linguistically (Connally & Dancy, 2016).

Community Colleges and Universities

Teacher preparation programs play a vital role in ensuring that teachers have the knowledge, skills, and dispositions to provide high quality services to children (Sumrall et al., 2017). This is true regardless of whether that education occurs at a community college or a university. Research suggests that the majority of students who begin at a community college intend to transfer to a four-year institution to finish their degree (Laanan, 2003). However, historically, few community college students successfully transfer to a four-year university

(Jenkins & Fink, 2016) and only half of those students earn a bachelor's degree (Monaghan & Attewell, 2015).

Thus, transfer initiatives are occurring across the United States to improve communication between two- and four-year institutions of education. The transfer initiative in Virginia began in 2018 when it was requested by the legislature. The goals were to: 1) remove barriers to transfer; 2) improve credit efficiency; 3) address time-to-transfer; and 4) ultimately, improve degree attainment at both community colleges and four-year institutions. The process included collaborative course development including course descriptions, objectives, and even suggested course materials. The impact improved transferability and created a true two-year + two-year program so students who begin at a community college and transfer to a four-year institution, can finish their degree in four years.

Grow Your Own Programs

As noted earlier, GYO programs are one strategy for addressing the teacher shortage by preparing more classroom teachers. GYO programs are partnerships between community-run organizations, local school divisions, and institutions of higher education that work together to recruit and prepare individuals to teach in local schools (Garcia, 2020). The research suggests that recruiting local individuals to become teachers results in addressing the teacher shortage, diversifying the teacher workforce, and increasing retention rates in the classroom (Valenzuela, 2017).

Creating programs to increase the number of teachers is not new, but many GYO programs specifically focus on recruiting teachers of color. Teachers of color have historically faced barriers to traditional paths to licensure and GYO programs offer access to teacher licensure to individuals of color from various class, language, and social backgrounds (Gist et al.,

2019). The benefits to diversifying the teacher workforce are great. In 2021, the teacher population in the United States were 80% White, 9% Hispanic, 6% Black, 2% Asian, 2% multiracial, <1% American Indian/Alaska Native, and <1% Pacific Islander, while the student population was 45% White, 28% Hispanic, 15% Black, 5% Asian, 5% multiracial, 1% American Indian/Alaska Native, and <1% Pacific Islander (NCES, 2023). The mismatch of race/ethnicity and cultures between teachers and students can negatively impact student achievement, especially when there is a lack of culturally relevant pedagogy (Valenzuela, 2017). On the other hand, racial and ethnic congruence between teachers and students can lead to academic achievement among students of color emphasizing the need to diversify the teacher workforce (Valenzuela, 2017; Villegas & Irvine, 2010).

For states aiming to begin an initiative such as this, Muñiz (2020) highlights seven characteristics of high-quality GYO programs. These are recruiting candidates of the local community, making the program accessible with and without a bachelor's degree, providing support for finances, academics, and socially, maintaining a sustainable funding model, having paid and supervised work-based experiences, encouraging collaboration and communication among all program partners, and tracking student success and program impact. These ideas can help a program get started. While much of the research highlights the benefits and potential of GYO programs, the literature provides limited information on the challenges to GYO students completing their degree. Gist et al. (2019) describes structural and relational barriers that exist to students in GYO programs. These include licensure assessments, networking opportunities, and building social capital. Licensure assessments are a barrier to teacher candidates in GYO programs and traditional teacher preparation programs (Abbate-Vaughn & Paugh, 2009). Finally, much of the research focuses on identifying types of GYO programs, recruitment efforts, and

graduation rates. Thus, we aimed to focus on the perspectives of the partners involved to better understand the lessons learned during implementation of a GYO program.

Method

A sociocultural lens provided a nuanced understanding, within this phenomenological study (Schram, 2006), of the lessons we learned while implementing a GYO program at the community colleges and university. Phenomenology, as a methodology, can assist researchers in understanding the experiences of individuals as they engage in shared experiences (Creswell et al., 2007). In this paper, we identify the phenomenon as the GYO program.

Context

As noted earlier, the GYO initiative came about due to legislative funding. A significant portion of the funds provided financial support for the GYO students. The paraprofessionals who needed to start or finish their associate degree did so at one of four community colleges (Blue Ridge, Laurel Ridge, Brightpoint, or Tidewater). The paraprofessionals who already had their associate degree took courses online through JMU. The financial support included tuition, fees, access to online tutors, and vouchers for state licensure exams.

The funding also provided a stipend to each community college whose service area included one of the eight school divisions across the state chosen to participate in the GYO initiative. This stipend was seen as a way to support the community college teacher educators who did additional work to support the GYO students such as recruiting, advising, helping with enrollment, and assisting students in the transfer process. The individuals who received the stipends we called Community College Liaisons. The authors of this paper are the four Community College Liaisons (Lori, Mark, Meredith and Virginia), as well as the Director (Joy) and Assistant Director (Katie) of the GYO program.

Recruitment

We followed a similar recruitment process for the paraprofessionals in each of the participating school divisions. The Director of the GYO program and the Community College Liaison typically met with the school divisions in the late fall to set a time for a joint information session for current paraprofessionals. The recruitment meetings with the paraprofessionals were conducted in person and virtually. They were usually held outside of school working hours. We explained the program to the paraprofessionals and the process for enrollment at either the community college or university. Each school division had their own way of handling which paraprofessionals were recommended for program enrollment. After the selection process, the paraprofessionals met with either their Community College Liaisons or the Director or Assistant Director of the GYO program depending on where the paraprofessional was in their college career.

Participants

The 38 paraprofessionals at the university and the 49 paraprofessionals at the four community colleges continued to work in local schools while taking courses. All of the courses at the university were online whereas the courses at the community college were either online or in person.

The paraprofessionals enrolled at the community college had a vast array of college credits, ranging from none to having already completed an associate degree in areas other than education. Most were somewhere in between. As such, each required one-on-one advising. The Community College Liaisons met with the paraprofessionals at least once per semester for academic advising. Out of the 49 paraprofessionals enrolled at the community colleges, 34 were

White, 12 were Black, two reported being two or more races, and three paraprofessionals did not specify their race.

The paraprofessionals at JMU moved through the online teacher preparation programs in a cohort, enrolled in courses with other. The cohort model helps build community and positive relationships among participants. The Director and the Assistant Director often met with the paraprofessionals as academic or personal issues arose. Out of the 38 paraprofessionals at the university, 25 were White, seven were Black, four reported being two or more races, and two paraprofessionals did not specify their race.

The four Community College Liaisons for the GYO program (Virginia, Mark, Meredith, and Lori) ranged in years of service in this role from less than six months (Mark) to three years (Lori). All were former classroom teachers, and one was also a former school administrator. Their primary responsibilities at the community college varied from instructional faculty and department chairs to academic advisors. All four were selected as Community College Liaisons based on their role at the community college and their respective community college's proximity to the partnering school divisions selected to receive funding through state legislation. The two teacher educators at the university, Joy and Katie, served in the roles of Director and Assistant Director of the GYO program. As former classroom teachers themselves, they drew on their experience to best support the paraprofessionals.

For the purposes of this paper, we chose to focus on the lessons we learned through the first year of implementation of a GYO program supporting paraprofessionals enrolled at the university and at the community colleges.

Data Sources and Analysis

Early on in the creation of the GYO program, we, the Community College Liaisons and the Director/Assistant Director of the GYO program, established monthly meetings to discuss various aspects of the program. The meeting topics include recruitment efforts, student enrollment, student registration, communication with students, advising of students, process of funding distribution by the University Billing Office, transfer guidelines for students ready to apply to the university program, problem solving when issues arose, and a time for questions and answers as needed. Notes were taken during these meetings.

As the Community College Liaisons and the Director/Assistant Director of the GYO program met with students, they took notes detailing what, from the students' perspectives, were going well and what needed to be improved specific to their participation in the GYO program. The students were required to meet with the Community College Liaison at least once a semester, but they often met more often depending on the paraprofessional's needs.

The notes from the monthly conversations and student meetings shed light on the lessons learned while implementing a GYO program. To analyze the data sources, we followed Creswell and Creswell's (2018) coding procedures. First, we read and discussed the notes from our monthly group meetings. Then we examined the notes from the individual student meetings. While examining both data sources, we focused on aspects of the GYO program we should keep or revise. Patterns were organized by themes, and we used peer debriefing with outside researchers to validate interpretations.

Findings

During the first year implementing the GYO program at the community colleges and university, we, as teacher educators, learned several lessons which included: 1) the specific needs

of paraprofessionals; 2) university, community college, and school division policies; and 3) the importance of collaborative relationships.

Specific Needs of Paraprofessionals

One important lesson we learned during the first year of implementing the GYO program was that non-traditional students, who work in schools full time as paraprofessionals, require different types of support based on their needs. Each paraprofessional joined the GYO program with different life experiences which included: their responsibilities as adults; how long it had been since they were a student themselves; and their various levels of comfortability with technology.

All of the paraprofessionals in the GYO program were adults, most of whom worked full-time jobs while also balancing their family responsibilities, often caring for both children and aging parents. At the community college, the paraprofessionals set their own pace of enrollment. They often took one course at a time which in turn slowed down the completion of their degree. The converse also occurred when the paraprofessionals thought they could handle being both a full-time student and employee and ended up with unsatisfactory grades. This slowed down their transfer time to the university and required students to find alternative funding to retake courses. One paraprofessional shared, "I thought I could do it but then by the time I realized I could not … it just became too much." At JMU, the Director and Assistant Director of the GYO program saw similar issues although the students moved through the courses as a cohort. Every semester there seemed to be at least one student who got "off track" because life happens such as a death in the family, mental health issues, or a spouse's loss of a job.

Furthermore, with an age range of 23-73, some of the paraprofessionals had not been in a classroom as a student in more that 30 years. For those older students, starting or returning to

college and adapting to new technology at the same time was challenging. Due to work

schedules and class offerings, many paraprofessionals elected to take asynchronous online

courses at the community college but found them challenging due to not having "face time" with

instructors.

At both the community college and university, several of the paraprofessionals struggled

with online learning technology (Canvas, email, Google Drive, etc.). "If I could just turn this all

in on paper, I would be golden," a paraprofessional shared during a phone call with the GYO

Director, Joy. In addition, many used school division issued computers which sometimes did not

allow the paraprofessionals to download certain programs or access particular platforms needed

to complete their course work.

University, Community College, and School Division Policies

A three-way Memorandum of Understanding (MOU) was signed between JMU, each

participating community college, and the school division(s) in their service area. However,

during the first year of the GYO program, we learned that although the MOU outlined each

stakeholder's responsibilities, there were still a lot of policies that needed to be developed or

revised in order for the paraprofessionals to have a successful experience in this program. These

policies included: the need for individualized advising; streamlining financial disbursement; and

navigating practicum and student teaching while working full time.

Out of the six of us, only Meredith was an actual full-time advisor. However, it became

clear that many of the GYO paraprofessionals required individual advising due to having a

smattering of college credits and/or associate degrees from institutions outside of Virginia or

even outside of the United States. This was especially true in the Tidewater area where there is a

large military student population. One paraprofessional was especially frustrated stating, "If I did

the work, why won't Virginia accept it? Just because I didn't do it here?" Often this advising

crossed institutions due to the specific transfer agreement requirements, which after multiple

emails, we (the paraprofessional, the Community College Liaisons, and the university team)

often met via zoom to determine if course credits would transfer and meet graduation

requirements.

As teacher educators, we had little experience with the financial side of our institutions.

Working with the university and community college business offices, as well as those that

oversee financial aid, was a big learning curve. Luckily, the experts in those offices were able to

provide examples of how other scholarships distribute funds which assisted in streamlining the

funding disbursement. This allowed the paraprofessionals at JMU and the community colleges to

register for courses without having to pay ahead and then being reimbursed.

The MOU outlined the expectation of flexibility in helping the paraprofessionals meet the

requirements necessary for licensure such as practicum hours and student teaching. The majority

of the school divisions allowed the paraprofessionals to use their current classroom assignment

for their practicum hours. Other paraprofessionals were told to use their planning time and/or

lunch breaks to complete the required hours. One paraprofessional shared that their school

division, "said that I cannot do any observation during my contracted hours at work… if this is

going to be an impossible or very difficult feat moving forward, there is a chance that I may not

continue with the program at this time." Some of the paraprofessionals were placed in

classrooms or schools that did not align with their degree choice. For example, one

paraprofessional worked in a high school but was seeking a degree and licensure in elementary

education. Being in a different building than where practicum hours needed to be completed,

made it challenging for the paraprofessional to meet the requirements for their courses. Thus, some paraprofessionals had to transfer to classrooms or schools that aligned with their degree.

Collaborative Relationships

The importance of collaborative relationships is not a new concept to us as teacher educators; however, we were surprised how quickly and deeply those relationships developed not only between the six of us but also with the paraprofessionals we were working to support.

We all agreed that the biggest contributing factor to the collaborative relationships developing between the Community College Liaisons and the Director/Assistant Director of the GYO program were our monthly zoom meetings. Not only did this help everyone get to know each other across the five institutions, but it allowed us to share knowledge which helped us solve problems of various sorts. Mark stated, "Each member of the team has their own thoughts, views and opinions. Being able to work together for a common goal has been beneficial for each of the institutions along with the students who benefit from this great program." The ability to connect paraprofessionals enrolled at the community college directly with university faculty and program leaders made the process of transfer more successful and gave the paraprofessionals a positive experience in applying and completing a college program. Many of the Community College Liaisons were the only teacher educators in their department. Meredith shared, "Through the team meetings, I was able to strategize with the other liaisons to create best practices and timelines for connecting with students and other institutional partners." Being able to converse regularly with others who also work at a community college provided a sense of community that we have grown to rely on.

As noted earlier, we also developed collaborative relationships with the paraprofessionals. Due to their work schedule, we often spoke with them via phone or zoom at

nights and on the weekends, getting to interact with their children and/or pets as they often wanted attention during these times. These conversations helped keep the paraprofessionals motivated. One paraprofessional shared, "I extend my thanks to Katie for the constant reminders … I feel like JMU was a great choice because the reminders help me stay on track with everything." Likewise, the paraprofessionals got to know all of us on a similar level. For example, since Joy got a new puppy near when many of the paraprofessionals started the program, they would often ask about it when meeting with Joy. In addition, we met more formally with the paraprofessionals in the GYO program several times a semester, which as teacher educators, is not something we typically do unless a student is in a course we teach.

Discussion

This article highlights the lessons we learned at the community college and university during the implementation of a GYO program. By choosing to frame the paper this way, we hope that other teacher educators can use what we learned in applicable ways. In this section, we focus on how we reflected on the lessons learned and took action in order to better support the paraprofessionals and/or to revise aspects of the program.

As the first year progressed, we quickly learned the various paraprofessionals' needs and worked to get them specific support. There are many resources at the community college and JMU that students can access remotely such as learning and technology supports. During conversations with the paraprofessionals, we began sharing specific people in these departments they could ask for which seemed to make reaching out for help a little less scary. Instead of being reactive to the paraprofessionals' needs, now in year two of the GYO program, we are being proactive. For example, we created videos to help the paraprofessionals navigate the application process to JMU which we realized last year was very confusing for many of them.

During orientation meetings, we now provide an overview of Canvas, the learning management

system, so that the paraprofessionals have a basic understanding prior to courses starting.

Delgado et al. (2021) notes that paraprofessionals have a lot of expertise specific to the schools

and students they work with. Our goal was to provide the necessary supports so they could also

be confident in the role of a student.

Abbate-Vaughn and Paugh (2009) noted the following as barriers for non-traditional

students interested in becoming a teacher: 1) cost; 2) licensure assessments; and 3) loss of

income while student teaching. The legislative funding that JMU received helped alleviate the

cost, with the exception of textbooks, provided tutors and paid vouchers for the licensure

assessments, and the memorandum of understanding, signed by the community colleges, school

divisions, and university prevented any loss of income during student teaching. Despite the

alleviation of some barriers, during the first year of the GYO program, we spent a lot of time

navigating other university, community college, and school divisions policies. Since we had the

opportunity to work with eight different school divisions, we saw how various divisions

navigated their own policies. For example, as we noted earlier, some school divisions do not

allow the paraprofessional's job to count as practicum and instead they require their employees

complete these hours "off the clock." Muñiz (2020) writes about the variety of supports that non-

traditional students receive. When we meet with school divisions now, we simply share what

other school divisions are doing to support their paraprofessionals. This has led to some

reconsideration of policies, no action yet, but we are hopeful.

Collaborative relationships were easy to build but at times challenging to maintain due to

busy schedules. However, always at the back of our minds were the statistics of low transfer

success (Jenkins & Fink, 2016; Monaghan & Attewell, 2015). Having standing monthly

meetings provided a block of designated time to have conversations about the GYO program. When Joy saw the call to present at the Fall 2023 Virginia Association of College and Teacher Educators conference, she mentioned it to the group. Presenting together allowed us to see each other in a different light. For example, Lori is very funny and Katie likes to be over prepared. That experience led to further conversations which ultimately led to writing this article together.

Limitations and Next Steps

Our study is limited in that we only gathered data for the first year of the GYO program and focused specifically on the lessons we learned as teacher educators. Furthermore, as is the case with qualitative research, our own personal experiences and current roles at our institutions likely may have impacted our understanding of the data. However, this study shows how those at two- and four-year institutions can collaborate to support non-traditional students who are interested in becoming teachers by navigating existing policies while building strong relationships.

Research suggests that GYO programs provide a pathway into the field of education for candidates of color and can lead to high retention rates (Carver-Thomas, 2018). Although the demographic data for the first year of the GYO program is more diverse than the on-campus student population at JMU, more needs to be done to address the mismatch of race/ethnicity and cultures between teachers and students. One way we can do this is by having conversations with school divisions about the importance of selecting paraprofessionals of color for the GYO program. Furthermore, as a program, we need to reflect on how we are ensuring that the courses and policies at the community colleges and university are not only culturally relevant but also culturally sustaining to best support a more diverse student body.

We argue that it is not enough for paraprofessionals to earn a degree. We want them to remain in the profession. Beginning teachers who participate in an induction program have higher satisfaction, commitment, are more likely to implement best practices, use effective classroom management strategies, and create an overall positive classroom environment (Schwan et al., 2020). Mentorship and professional development are also key in retaining all teachers but especially teachers in high-need communities. Thus, we argued it was essential for all GYO participants, once they finish their degree, to have access to a university run induction and mentoring program at no cost to their school division.

Findings from our GYO implementation efforts also have important implications for legislative policy. Education programs across the United States are actively developing new and innovative programs, working diligently to recruit students who reflect the demographic characteristics of the students they will teach. However, there are still too many barriers. For example, policies related to admission into teacher preparation programs and requirements for teacher licensure at the state level need to be amended in order to make a dent in teacher shortage and increase the diversity of the teacher population.

Conclusion

As teacher educators, we are passionate about our profession and will do just about anything to support those who want to become teachers. The GYO program offers paraprofessionals the opportunity to start or finish their degree by providing funding with the expectation that they continue to work in the school division they are already employed in. We hope that as other teacher preparation programs implement alternative pathways, equally innovative changes, specific to teacher education accountability and accreditation policies, can

begin to occur at the state and national levels. We welcome any opportunity to be part of the

conversations and more importantly the action that must happen.

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Editors' Note about Invited PhD Student Manuscripts

The invited article below was written by Lin Rudder, a current PhD student in education at George Mason University. This publication is the result of a pilot project proposed by the *TTEJ* editors and approved by the VACTE board. This pilot is intended to support doctoral students' (and potentially master's and undergraduate students') engagement with teacher education scholarship, with the publication process, and with the Virginia Association of Colleges and Teacher Educators. Rudder first drafted a version of this article for one of her early doctoral courses, and then she was provided feedback on multiple iterations of this article and mentored by her PhD program advisor (also a *TTEJ* editor) prior to being invited to submit it to the journal. She also received one external review and one editorial review of the manuscript, to ensure that the article met the journal's standards of quality for publication. We are hopeful that this pilot might evolve into a regular feature of the journal.

An Unfair Comparison: The Limited Exercise of Comparing Pathways to Address Teacher Shortages

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Abstract

After the COVID-19 pandemic, many states expanded alternative teaching licensure to address nationwide teacher shortages. This manuscript sought to compare the effectiveness of traditional preparation programs and alternative certification programs but found the comparison to be inconclusive because those categories were too broad. This analysis instead identified several trends in each of the two pathways. Generally, alternative programs attracted more diverse candidates because the unpaid internship model of traditional programs was a barrier for many candidates. Meanwhile, many traditional programs prepared teachers more effectively, particularly in their first year. However, the connection between credentialing pathway and long-term retention was unclear. Based on the findings of this article's analysis, policymakers need to evaluate alternative programs closely to ensure they maintain high standards for accreditation and so that teachers who enter the classroom via alternative pathways are properly prepared, particularly if the goal in expanding alternative pathways is to address teacher shortages. More research is needed on the impact teachers had on students' learning based on their credentialing pathway.

Keywords: teacher education, alternative licensure, teacher shortage

In 2015, I began teaching in northern Virginia on a provisional license. Although enrolled

in a Masters of Education program at George Mason University, the cost of the internship was a

barrier. I was a first-generation college student from a working-class family climbing a mountain of student loan debt.

The credential pathway laid before me was grim. I was asked to pay tuition to work, unpaid, 40 hours a week at a school as a student teacher. I would have to quit a good job at the Smithsonian Institute to accomplish this. I would have to take out more student loan debt or get a part-time, weekend job, essentially working 70-hour weeks—all while still maintaining a full course load.

Instead, I applied for teaching jobs. I interviewed at nine schools, and only one offered to take me on as an unlicensed, provisional teacher. It was a school in a high poverty area with a significant English Language Learner population. I became a stereotype: a school with a massive teacher shortage eager to take on an underprepared, provisionally-licensed teacher because they had a need to fill.

Even then, schools in the United States were facing a teacher shortage, and my situation was not a new phenomenon. Teacher attrition has seen a steady increase since 1980 (Kuenzi, 2019); the COVID-19 pandemic only exacerbated an existing crisis, including in the Commonwealth of Virginia where I teach. At the start of the 2023-2024 school year, 4.5% of teaching positions were left vacant in Virginia, up from 3.9% in the year prior (Joint Legislative Audit and Review Commission, 2023). In an attempt to address these shortages, in 2022 Governor Glenn Youngkin enacted Executive Directive Number 3 which called for the Virginia Department of Education to approve a variety of incentive programs including various alternative pathways to prepare and license teachers.

Of course, alternative certificate programs (ACPs) are not new. They have existed alongside traditional preparation programs (TPPs) for decades, and many studies have been

conducted comparing the two. Nevertheless, the data on the effectiveness of ACPs versus TPPs

is anything but conclusive. Within the education community, there is often bias against and

suspicion towards ACPs, particularly from teachers certified through a TPP. In fact, many critics

of one type of program have drawn negative conclusions about the other based on anecdotes and

assumptions rather than research (Humphrey & Wechsler, 2007).

Ultimately, based on the results of the examination on which I report here, comparing the

two pathways has proven to be largely inconclusive. The effectiveness of teachers and the ability

to address teacher shortages was beyond the scope of this article's attention to how a teacher was

credentialed. However, through comparison, consistent trends within the pathways were

apparent. The goal in this article was to synthesize several decades of research comparing these

two pathways in order to arrive at an understanding of what general trends existed within and

across traditional and alternative preparation. Ultimately, I sought to understand if ACPs

deserved the criticism they have received and, potentially, to learn what structures made TPPs

allegedly more effective. Finally, I hoped to explore how ACPs may or may not help address the

ongoing teacher shortage. Because I was certified in Virginia on a provisional license, and

continued to teach in Virginia, this research specifically explored what alternative licensure

meant for the commonwealth. This focus enabled me to arrive at an understanding of what was

working in teacher credentialing and what barriers existed that prevented qualified people from

entering the classroom.

<div align="center">**Context**</div>

Some critics of ACPs have been concerned that lowering standards for credentialing will

result in teacher candidates who are unprepared for the classroom. In Virginia, the Joint

Legislative Audit and Review Commission (JLARC) is a bipartisan committee that reviews the

effects of legislation on behalf of the Virginia General Assembly. A survey conducted by

JLARC (2023) with responses gathered from Virginia school divisions found that school leaders

believed TPPs better prepared teachers than alternative pathways. Of those Virginia divisions

surveyed, 46% reported that provisionally licensed teachers—meaning teachers who were not

traditionally licensed before becoming the teachers of record—were poorly prepared; conversely,

only 3% reported poor preparation from teachers credentialed through a TPP. However, because

TPPs were often more time-consuming and expensive to complete than ACPs (Badiali et al.,

2021; Guthery & Bailes, 2023; Humphrey & Wechsler, 2007), many policymakers believed

expanding ACPs could address teacher shortages. Based on the research examined for this

article, it was difficult to conclusively determine whether ACPs better addressed teacher

shortages than TPPs. In fact, comparing traditional and alternative licensure pathways offered

few reliable conclusions at all.

Ultimately, while TPPs tended to offer more comprehensive preparation, benefits to

ACPs were present that should be acknowledged by TPPs. These included their lower cost and

faster timelines which often attract more diverse candidates. Finally, a key recommendation

drawn from this comparison is that policymakers who wish to address teacher shortages should

assist TPPs financially while holding ACPs to a high standard for accreditation.

Method

For this analysis, it was essential to define ACPs because the term "alternative" describes

a myriad of programs, including career switcher programs hosted by universities, online modules

conducted during a teacher's first year, and leadership organizations like Teach for America.

Generalized differences usually, but not always, existed between the two pathways. Most often,

TPPs were hosted by universities that offered coursework studying pedagogical theories and

practical knowledge while ACPs prioritized on-the-job training over theoretical coursework. In

most cases, ACPs offered faster certification than a TPP with the goal of attracting career

switchers or recent college graduates (Lincove et al., 2015). It should be noted that both

pathways required teachers to hold a bachelor's degree before being placed in schools and

required some degree of coursework either before or during placement (Al-Bataineh et al., 2009;

Humphrey & Wechsler, 2007; Joint Legislative Audit and Review Commission, 2023).

      To conduct the analysis reported in this paper, alternative programs were defined as any

licensure pathway that paid students during the bulk of their clinical work because they were the

primary teacher of record: that is, programs that placed teachers in the classroom before they

were fully licensed in order to gain on the job experience as an employee rather than a student

teacher. Conversely, TPPs offered clinical work that was typically unpaid where students

observed and assisted a mentor teacher who was the primary teacher of record (Humphrey &

Wechsler, 2007; Lloydhauser, 2022; Van Overschelde & Wiggins, 2020). The distinction

between these two pathways was consistent with most established research on the topic.

      For this analysis, eight current research articles, a dissertation, and three government

reports (two national and one local to Virginia) were analyzed in an effort to synthesize the scope

of the teacher shortage and common characteristics of ACPs. One research article (Afacan, 2022)

examined an alternative teacher residency program. Three research articles and one dissertation

analyzed common characteristics of ACPs and teacher preparedness and retention (Al-Bataineh

et al., 2009; Humphrey & Wechsler, 2007; Lloydhauser, 2022; Van Overschelde & Wiggins,

2020). Humphrey and Wechsler (2007)'s comparison of seven ACPs was a seminal work, and

much of the other articles sought to expand on their original research. Therefore, I centered my

selection of articles by other studies that had cited Humphrey and Wechsler (2007) in an effort to

explore the progression of these comparisons over time. These articles gave crucial background on not only the characteristics of these topics but the history of how they have been traditionally studied in this field. Two research articles studied the correlation between ACPs and teacher self-efficacy (Badiali, 2021; Darling-Hammond et al., 2002; West & Frey-Clark, 2019) which I chose to ascertain how each pathway may or may not correlate to teacher confidence and thereby preparedness. The government documents and final dissertation helped provide context on the current landscape of the teacher shortage and current recommendations to policymakers; I selected these because they helped define the political landscape of the teacher shortage and expansion of ACPs as a mitigation effort.

Findings

Based on the systematic review of these documents, I was able to identify four themes. Generally, ACPs attracted more diverse candidates in terms of age, race, and gender (Al-Bataineh, et al., 2009; Van Overschelde & Wiggins, 2019). Long-term teacher retention could not be conclusively determined by studying pathway alone (Al-Bataineh, et al., 2009; Humphrey & Wechsler, 2007; Lloydhauser, 2022). What could be ascertained was that regardless of pathway, teacher preparation programs that included meaningful coursework and supportive clinical work best prepared new teachers (Afacan, 2022; Harrington & Walsh, 2022; Lincove, et al., 2015; Lloydhauser, 2022). Finally, if the goal is to certify ACPs as a means of addressing the teacher shortage, these alternative programs must be regulated by policymakers to ensure teacher candidates are being given the tools to enter classrooms confident and prepared to teach. Conversely, this also means removing barriers to teacher certification such as GPA requirements and standardized testing which do little to improve teacher self-efficacy.

ACPs Attract Diverse Candidates

By all measures, the United States has become increasingly diverse. Nevertheless, according to an analysis by McDaniel (2022), teachers remain mostly white, female, and middle class. While all teachers can be effective, research shows huge benefits to having a diverse teaching staff. Role models help students find confidence. Diverse schools that include a variety of experiences and perspectives make all teachers more culturally aware (McDaniel, 2022). Administrators and hiring directors at school districts insist they want to hire diversely (United States Government Accountability Office, 2022). While data is somewhat mixed, many recent studies suggest ACPs attract more diverse candidates including people of color, men, and older folks (Al-Bataineh, et al., 2009; Van Overschelde & Wiggins, 2020).

The bulk of research on teacher credentialing has examined Texas due to its decades of deregulated laws surrounding teaching licensure. Texas includes the most diverse credentialing options in all of the United States (Lincove, et al., 2015). Humphrey and Wechsler's (2007) seminal study of seven different ACPs in Texas suggested that ACPs may not have attracted more diverse candidates than TPPs. While participants in the ACPs they studied were more diverse than teachers nationwide, when comparing that data to local demographics, they found that the percentage of diverse candidates was just slightly higher than average; instead, the diversity more closely matched the composition of specific labor markets in the area. This means that in a school district with a diverse population of teachers, the diversity of ACP participants was on par with the overall district. In all cases, the diversity of teachers was lower than the diversity of students.

However, many studies, both nationwide and in Texas, have since recorded different results. Al-Bataineh, et al. (2009) found that teachers certified through ACPs were, on average,

older and more diverse than teachers certified in TPPs. In particular, more men were certified through ACPs; the author speculated that this might be the case because these programs recruited former military personnel.

In a more recent study, Van Overschelde and Wiggins (2020) acknowledged Humphrey and Weschler's research and countered it with their own analysis of alternatively certified teachers in Texas. Data from their study of the years 2006-2017 showed that women were more likely to be certified through TPPs, but men and people of color were likely to do so through ACPs. They also noted that Black teachers were 7% less likely to leave the classroom in that decade, and Latinx teachers were 24% less likely. While these scholars acknowledged more study was needed to ascertain why teachers of color remained in the profession longer than white teachers, they also found that older teachers were more likely to remain in the classroom. Specifically, for every ten years of age, teachers were 10% more likely to stay in the classroom than a younger peer which means attracting diverse, older teaching candidates would be beneficial for hiring administrators hoping to retain teachers long term.

When teachers were asked why they chose their ACP program, cost was the biggest obstacle mentioned (Lloydhauser, 2022; United States Government Accountability Office, 2022). In 2023, the JLARC conducted a staff survey of 14 TPPs from Virginia universities; ten universities cited financial concerns as top reasons why teacher candidates did not enter or complete their program. In another survey, 73% of new teachers who completed a TPP cited cost to be a major barrier. One respondent claimed to have borrowed $7,000 to cover food and housing costs during their student teaching (Joint Legislative Audit and Review Commission, 2023).

TPPs "frequently culminate with a full-time (40+ hours per week), semester- or year-long student teaching experience that is financially burdensome for low-income students because they are unable to work a paid job at the same time" (Van Overschelde & Wiggins, 2020, p. 314). In a TPP, student teachers typically work under a mentor teacher who is the teacher of record. This means that student teachers were working full-time in a school alongside their mentor teacher and often paid tuition for this privilege (Van Overschelde & Wiggins, 2020).

Meanwhile, ACPs offered students an income because they were the teacher of record. Statistically, people of color are less wealthy than white individuals in the United States (Bhutta, et al., 2020). Therefore, older individuals with families to support and people of color have been shown to be more likely to be drawn to an ACP over a TPP because they lacked the privilege to work, unpaid, through a traditional student teaching placement (Van Overschelde & Wiggins, 2020). Ultimately, if universities want to attract more diverse teacher candidates, and districts want to hire more diversely, the barrier of this unpaid internship model must be addressed. The limited data from Van Overschelde and Wiggins (2020) suggested some relationship between diversity and teacher retention, although they admitted more study would be needed in that area.

Teacher Recruitment and Retention to Address Teacher Shortages

While challenging the unpaid student teaching model may attract more diverse candidates, studying teacher retention overall in relationship to TPPs and ACPs was difficult because teachers have long left the profession for a myriad of reasons. In recent years post-pandemic, teachers reported a lack of support and respect as professionals alongside an increasingly demanding and disrespectful workplace culture as reasons for leaving the classroom (United States Government Accountability Office, 2022). Therefore, studying the link between

credentialing pathways and long-term retention was conjectural at best because there were many

factors influencing why even experienced teachers left the profession.

In fact, the number of teachers leaving the profession continues to far outpace the number

of newly licensed teachers. In Virginia, the 2020 school year began with a deficit of 3,000

teachers between the number of newly licensed teachers and those leaving the profession. In

2021, that number jumped to almost 5,500 teacher vacancies. Meanwhile, the number of new

teachers who entered the profession on provisional licenses was 6% in 2012. By 2021, it was

14%, and by 2022 it was 16% (Joint Legislative Audit and Review Commission, 2023).

States like Virginia that have approved more ACPs have been hopeful about these

programs' abilities to fill gaps in hard-to-staff schools and special education roles. However,

critics of ACPs have worried about a "revolving door" scenario (Van Overschelde & Wiggins,

2020). The concern is that if teachers are not adequately prepared for the job, they will not stay

in the profession long-term. Proponents of ACPs, meanwhile, have argued that the barriers

within TPPs have made it too difficult for passionate people to enter the profession. Identifying

this point of diminishing returns, where lowered barriers could still adequately prepare teacher

candidates, has been difficult. As well, prior education experience and on-site working

conditions have been shown to affect teachers more than their credentialing pathway (Al-

Bataineh, et al., 2009; Humphrey & Wechsler, 2007; Lloydhauser, 2022).

In that same study of Texas teachers between 2006-2017, 78% of TPP teachers and 47%

of ACP teachers were still teaching after five years. After ten years, 63% of TPP teachers and

28% of ACP teachers were predicted to have left the classroom. While the researchers noted that

scaling this data beyond the state of Texas was not possible due to reliability issues, it is still

noteworthy that ACP teachers left the profession sooner than TPP teachers (Van Overschelde &

Wiggins, 2020).

Studies that investigate the correlation between teacher retention and credentialing

pathway, including Van Overschelde & Wiggins (2020), often do not delineate specific types of

alternative programs. For instance, one organization often identified as a primary purveyor of

alternative pathways is Teach for America (TFA). Although frequently grouped together in

studies of ACPs, TFA is in many ways an outlier. They advertise themselves as a "leadership

development organization," not necessarily a teacher preparation program. While most ACPs

create pathways for candidates to become teachers, TFA advertises a two-year commitment.

Their marketing encourages candidates to teach short-term for the experience and resume

benefits (Americorps, 2020). When these studies included programs like TFA in their analyses, it

skewed retention data (Al-Bataineh, A, 2009; Humphrey & Wechsler, 2007; Van Overschelde &

Wiggins, 2020).

According to the JLARC in Virginia (2023), over the last ten years, teachers who

certified through an ACP had only a slightly shorter tenure than traditionally licensed teachers:

> Comparing the bottom quartile by tenure of fully licensed and provisionally licensed
>
> teachers, the bottom quartile of fully licensed teachers leave within four years or less; the
>
> bottom quartile of provisionally licensed teachers leave within three years or less. In
>
> addition, in Virginia, 27 percent of provisionally licensed teachers over the past 20 years
>
> did not go on to obtain full licensure after three years. (p.14)

The study noted these trends were not reflective of pandemic effects because data had not been

gathered since 2019. Furthermore, it specified that Virginia did not consistently track or analyze

data based on various teacher pathways: "Data on whether individuals prepared in Virginia

ultimately receive a Virginia teaching license, provide quality instruction, and remain teaching is

not currently shared with entities in Virginia's teacher pipeline" (Joint Legislative Audit and

Review Commission, 2023, p. 40). Therefore, while it would seem TPPs resulted in better

teacher retention, it was difficult to make conclusive analysis on teachers based on pathway

alone within the scope of this examination.

For instance, prior education experience had an impact on teacher success. The majority

of teachers who were certified through an ACP had prior experience in education either serving

as teacher assistants, substitutes, or coaches. These prior experiences offered new teachers vital

working experience that helped them be successful in the classroom (Guthery & Bailes, 2023;

Humphrey & Wechsler, 2007; Lloydhauser, 2022). Additionally, this prior classroom experience

was the reason many teacher candidates entered credentialing programs, and most candidates had

long-term professional goals for this reason (Guthery & Bailes, 2023). It was difficult to quantify

large scale trends when each individual teacher, regardless of pathway, brought specific work

experience and resiliencies. In Virginia, JLARC (2023) found that many school division staff

reported frequent examples of teachers from varied backgrounds and training to be extremely

effective teachers. While TPP teachers were thought to be more prepared in their first year of

teaching, this was only a short-term effect. Additionally, because Virginia does not currently

permit TFA as a licensure option, its data may better capture the genuine differences between the

two licensure pathways because teachers are ostensibly entering preparation programs with the

goal of making teaching their career, not their steppingstone.

However, the viability of ACPs as a long-term solution to teacher shortages was not clear

based on the studies examined for this article. There was evidence that as requirements for

teachers were lessened, the perception of teachers as highly qualified individuals deserving of

higher pay diminished as well. In Texas, an influx of alternatively certified teachers was shown

to lower teacher pay overall (Guthery & Bailes, 2023). Because teacher pay was often cited as

the reason teachers leave (or never enter) the profession (United States Government

Accountability Office, 2022), more alternatively certified candidates would not address the

teacher shortage after all if indeed it led to lowered teacher pay in those districts. Additionally,

this would be particularly problematic as ACPs attract more Black and Hispanic teachers (Al-

Bataineh, et al., 2009; Van Overschelde & Wiggins, 2020), and this would contribute to the

overall wage gap in America (Bhutta et al., 2020).

Finally in many districts, as enrollment in ACPs increased, enrollment in nearby TPPs

decreased which meant the actual number of certifying teachers stayed relatively stagnant

(Guthery & Bailes, 2023). Therefore, while ACP teachers could fill classroom shortages quickly

because ACPs are usually shorter than TPPs (Badiali et al., 2021; Guthery & Bailes, 2023), the

data on overall retention or alleviating the nationwide teacher shortage has been mixed and

identifying a clear connection between credentialing pathway and teacher retention remained

elusive. As a result, for this analysis, it seemed more practical to look past the "traditional" and

"alternative" labels and instead examine what credentialing structures help all new teachers feel

prepared and potentially stay in the profession long-term beyond the oversimplified identifiers.

Effectively Preparing New Teachers

Based on the analyses completed for this article, while it was not effective to draw broad

conclusions across credentialing TPP and ACP pathways due to the varying requirements of each

one, effective pathways of all types included similar elements: meaningful coursework,

encouraging mentors, and supportive clinical work. The data on the effectiveness of

credentialing programs for reducing teacher attrition has been mixed, but data on teacher

experience and overall self-efficacy is more clearly linked. Teachers who worked for more than ten years reported more self-efficacy than teachers who had worked less than ten years, regardless of their credentialing pathway (West & Frey-Clark, 2019). Therefore, while credentialing pathway itself was not a measure of long-term teacher success, teachers who stayed in the profession longer felt more effective. Because experience over time improved self-efficacy (West & Frey-Clark, 2019), it is reasonable to assume that teacher education programs of all types should identify how to create confident first year teachers who stay in the profession long enough to gain that critical experience.

Meaningful Coursework and On-Site Mentors

Harrington and Walsh (2022) studied 142 alternatively certified teachers in California as they participated in a state-led credential program of coursework and mentorship. As in many ACPs, participants were tasked with completing certifying coursework online while simultaneously teaching full-time. This program attracted a very diverse candidate pool—more so than TPPs in the area—and it did help fill several hard-to-fill roles in schools. All participants noted that the online coursework was helpful. Additionally, the teachers who had strong on-site support and mentors at their schools felt more prepared. One noted, "I really felt like I didn't know what I was doing for a long time and now that I'm in the credential program…I feel so much more equipped" (p. 77). However, those without adequate district support struggled, and some noted they were worried about completing their certification requirements while teaching simultaneously before their provisional licenses expired.

This study demonstrated why it can be difficult to conclusively compare TPPs to ACPs. Even within one alternative program, the researchers found mixed data that suggested a teacher's success and retention was mostly tied to each individual teacher's prior experience and the

support of their current work placement. Circumstances surrounding each individual teacher including experience and work environment affected their self-efficacy and attrition more so than their credentialing pathway alone (Harrington & Walsh, 2022; Lincove, et al., 2015). However, helpful coursework and supportive on-site mentors gave these alternatively licensed teachers the best shot at growing their confidence and efficacy. School divisions that rely on ACPs, therefore, should consider how these structures can be implemented.

Clinical Work

Even unpublished scholarly works such as dissertations and theses did not offer conclusive insights to distinguish between credentialing pathways, but these reports did highlight what clinical structures best prepared teachers for their first year of teaching. In a 2022 PhD dissertation, Lloydhauser examined the self-efficacy of six special education teachers in the western United States throughout their first year. These teachers were hired in a school with a shortage in the special education department. Three of the teachers were certified through a TPP, one was a career switcher ACP, and the other two certified through online ACPs. The pandemic had interrupted clinical placements for two of the TPPs, meaning only one of the new teachers had completed a traditional student teaching experience. The one teacher who experienced a full internship without serving as the teacher of record reported the highest level of self-efficacy. The two teachers who certified through a TPP, but had their clinical work truncated due to the pandemic, struggled during their first year of teaching. This highlighted how an unburdened clinical placement, where the student teacher is not the full-time teacher of record, impacted a teacher's confidence and self-efficacy enormously.

Meanwhile, two of the alternatively certified teachers did not know how to write IEPs, a major responsibility of a special education teacher. One of those alternatively certified teachers

was not hired back the following year despite the fact the shortage still existed in the school. Lloydhauser highlighted two major trends in this study. First, the unregulated requirements within some ACPs set teachers up for failure in their first year of teaching by not providing adequate training for their role. Secondly, a meaningful, supportive student teaching opportunity had a significant effect on teacher self-efficacy.

Ultimately, while some programs were more rigorous than others, many ACPs do require coursework and some level of clinical work similar to a TPP (Humphrey & Wechsler, 2007; Joint Legislative Audit and Review Commission, 2023). Therefore, the terms "alternative" and "traditional" are less important without context; rather, the quality of coursework and clinical hours in addition to the experience and support teachers receive in the classroom to prepare and learn to teach were the biggest influences on teacher self-efficacy (Afacan, 2022; Harrington & Walsh, 2022; Lincove, et al., 2015; Lloydhauser, 2022). While any program may offer clinical work, when teachers are supported as student teachers first, before becoming the teacher of record, they have a better chance of developing these skills without the simultaneous pressure of the job (Lloydhauser, 2022). With regard to this trait, TPPs had an advantage over those certifying through ACPs because they typically offered their students more structured, supportive clinical experiences (Afacan, 2022; Darling-Hammond et al., 2002).

However, even amongst TPPs clinical experiences can have varying levels of quality (Badiali et al., 2021). Ultimately, all pathways had the potential to struggle in creating this clinical experience structure. In many cases, challenges persisted with how mentor teachers were selected, trained, and compensated for this crucial role (Badiali et al., 2021). Both ACPs and TPPs best prepared teachers by ensuring their clinical work intentionally supported teacher candidates.

Responsibly Shaping Teacher Preparation Programs

If broadening the use of ACPs is meant to help ameliorate the teacher shortage, other

factors must be considered to ensure ACPs maintain efficacy. Additionally, there are avenues

that TPPs could consider to better suit these changing times. According to the research reviewed,

due to the manner through which they are funded, universities had more freedom to adapt

coursework and requirements to be responsive to the needs of teachers and the local community

they served. Lincove et al. (2015) noted that public and nonprofit universities, which in addition

to tuition are funded through subsidies, do not have to rely solely on a profit margin to attract

students. They could responsibly make decisions about the requirements for their programs

based on what effectively serves teachers and districts. Meanwhile, ACPs and for-profit

universities are "serving customers." The structures of their programs are often tailored to

attracting as many of these customers as possible to enroll in their program. This means their

mission may not always be teacher preparation but rather marketing. A nonprofit TPP would

have the benefit of investing in a community long-term, while a for-profit ACP may only benefit

from short turnover and traffic within their program (Lincove et al., 2015). Further, if teachers do

not stay in the classroom long-term, that actually benefits ACPs' supply and demand model.

Unregulated Nature of ACPs

Therefore, for ACPs to be an effective credentialing option, they needed to be regulated.

For example, although the Commonwealth of Virginia approved an online ACP in June 2023

called iteach, the special education certification was removed three months later when the

Virginia Department of Education realized the modules did not meet several key competencies

of special education teachers, including writing IEPs. This particular ACP, therefore, did not

initially help address a major high-need teaching area as the Commonwealth had hoped because

it did not create mandatory coursework to actively support special education teachers (Bryson,

2023). However, in November 2023, iteach notified the Virginia Department of Education

(VDOE) that it had updated its coursework, and the VDOE restored its special education

certification (Rozell, 2023). In this instance, Virginia policymakers served a crucial role in

supervising ACPs as a pathway in their state. While ACPs proposed to quickly fill teaching gaps,

it was up to policymakers to ensure high standards were legally maintained, so that gaps were

filled with qualified, well-prepared teachers. Due to their reliance on profit margins (Lincove et

al., 2015), it is doubtful ACPs would police themselves.

Eliminating Unnecessary Barriers

Based on the literature reviewed for the analyses shared in this article, holding a high

standard for accrediting programs should not translate into erecting more barriers to entry into

the teaching profession. For example, raising GPA requirements for teacher candidates within

TPP programs did not increase teacher self-efficacy, and it resulted in lower enrollments of

teacher candidates (Van Overschelde & Wiggins, 2020) meaning these arbitrary "standards" did

not correlate to better prepared teachers. In fact, licensure already required expensive testing on

the state level, and these additional barriers only deterred potential teacher candidates (United

States Government Accountability Office, 2022).

In Virginia, the Virginia Communication and Literacy Assessment (VCLA) is a state-

specific literacy test required for all new teachers to earn licensure. Over the past six years, 86%

of test takers eventually passed the VCLA. This means 14% of test takers did not pass. The test

was developed in 2007, and, in a survey of 14 Virginia TPPs, 11 noted that the VCLA was

outdated and did not measure teacher effectiveness. Additionally, it was cited by several Virginia

universities offering TPPs as a main reason teachers did not complete their credentialing

program (Joint Legislative Audit and Review Commission, 2023). In an era when the state desperately needs more teachers to become licensed, this is an unnecessary and expensive barrier.

<div align="center">**Recommendations and Conclusion**</div>

Critics of alternative credentialing programs have sometimes made sweeping generalizations about the quality of these structures. Yet it is crucial to recognize that teaching as a profession is at risk. Consequently, it's important for teacher educators and policymakers to appreciate that change on multiple fronts in the field of teacher preparation might help bring more teachers to the profession and prepare them adequately.

In 2015, when I presented the provisional licensure paperwork to my university advisers as I was considering taking on a full-time teaching position before I finished my teacher preparation program, they cautioned me to reconsider. I felt isolated from the members of my cohort who were excited for their internship placements. However, I had a family legacy of evictions and bankruptcy. I felt the weight of my student loan debt keenly, already anxious about how I would ever pay off the massive sum. I had already spent five years in college while working full-time just to pay my bills. I was tired, and I wanted a career that would launch me to the middle class.

I asked my adviser to sign the paperwork.

My first two years of teaching were incredibly difficult, but by year three, I felt more prepared. Since then, I have stayed in the profession. I went on to become a National Board Certified Teacher. I have earned exemplary scores on administrator evaluations. Ultimately, it would seem that my decision to follow a provisional path did not hinder my ability to become a confident, effective teacher.

The coursework of my TPP and a bevy of supportive mentors were crucial to my success, particularly as I finished my last year of coursework while simultaneously teaching full-time. I continued to feel separate from the others in my program who were moving through their student teaching, but the coursework and my on-site mentors kept me afloat.

Measuring my effectiveness as a classroom teacher year one against my effectiveness now would reveal a clear distinction. Experience is everything. A fairer measure—and one more relevant to this article—would be to compare my effectiveness against a first-year teacher who completed a traditional student teaching internship. However, even then, the quality of their internship would still be a factor in the quality of their instruction and their persistence in the teaching profession. The subjects we taught and the administrators we worked with, and even the politics in play in our states, would all affect our success as teachers. The fact I benefited from both supportive mentors in my ACP-like internship and TPP coursework helped set me up for success even without a true student teaching opportunity.

Ultimately, ACPs and TPPs cannot be compared fairly, based on the research available now. One is not superior to the other when slotted into these broad categories of "alternative" and "traditional." Instead, each individual teacher candidate has an individual experience that shapes their success as a classroom teacher. Individual programs need to be evaluated independently to measure their quality because some are simply better than others. All teacher preparation programs should meet quality standards that support teacher candidates of all backgrounds. All programs should consider if they are erecting unnecessary barriers that do not directly meet the goal of preparing teachers. Policymakers serious about ending the teacher crisis should make necessary changes to fund teacher preparation programs and hold ACPs accountable to a high standard.

TPPs should consider what they can learn from ACPs. For example, universities should examine how their programs could be more inclusive of a diverse candidate pool while still maintaining meaningful coursework and clinical hours to prepare teachers effectively. To attract more diverse candidates, the cost of student teaching within TPPs remains a barrier. If universities truly wished to diversify their teacher candidates, stipends for clinical work should be considered. The current traditional model attracts not only those who can afford college tuition but those who can survive without work for numerous, consecutive weeks at a time. Statistically, this would be fewer folks of color (Bhutta et al., 2020). Many TPPs and districts are addressing this through additional funding opportunities and residency programs. Residency programs themselves are sometimes considered an "alternative" pathway, but their specific structures and effectiveness were beyond the scope of this analysis.

To address the teacher shortage, many ACPs have been able to target specific schools and demographics to empower local communities that struggle to attract traditionally prepared teacher candidates. TPPs should recognize the school districts around them are not consumers of their product, but community partners (Afacan, 2022). TPPs might work with their neighboring districts to address hard-to-fill teaching positions through recruitment and incentive programs that model some of the structures of ACPs while still maintaining effective preparation techniques. Therefore, both pathways might serve as models for the other to improve and help address teacher shortages.

Additionally, meaningful clinical hours in any teacher preparation program have proven to have a significant impact on teacher preparedness (Lloydhauser, 2022). Mentor teachers should be selected with care. They should be trained to be effective coaches, not only selected for their exemplary teaching. Mentor teachers should be given time and compensation for doing

the work of training future educators (Badiali et al., 2021). Districts should not see student

teachers as burdens but rather as assets. This commitment and support would not only help

counteract the trend of teachers leaving the profession, but it might also create more effective

teachers overall (Lloydhauser, 2022).

If districts and states are committed to recruiting teachers, they might work towards

nationwide licensure reciprocity and pare back on expensive testing requirements (United States

Government Accountability Office, 2022). To this end, the JLARC report (2023) recommended

that Virginia authorize a waiver program that allows qualified individuals to fully license without

passing the VCLA. In Virginia, ACPs continue to expand to help address the teacher shortage.

More teachers are being certified provisionally. As one Virginia human resource director stated,

"I'm surprised when we get an application from a fully qualified teacher" (Joint Legislative

Audit and Review Commission, 2023 p. 4).

If this reliance on ACPs is necessary, policymakers need to ensure ACPs are preparing

teachers in methods grounded in research so that they are more likely to become effective

educators. Policymakers relying on ACPs to address shortages should be held responsible for

vetting and accrediting ACPs to ensure teachers are fully prepared to enter classrooms and be

successful. Moving forward, more research should be done on the self-efficacy of teachers

entering the profession as this relates to credentialing pathways. Furthermore, future studies

might compare the effectiveness of individual ACPs post-pandemic. Additionally, more research

needs to be done on the impacts of teachers on student performance to determine if a relationship

exists between credentialing pathway and student success. Ultimately, this analysis of TPPs and

ACPS reveals that these programs might serve synergistic roles for each other: the success in one

program need not necessarily be a challenge to the other but rather a growth opportunity for all.

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The Unicorn Teacher: Males in Early Elementary and Middle Level Education

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Abstract

This paper examines how male preservice teachers pursuing an elementary or middle level education certification perceive barriers and supports in their chosen major and future profession. To answer this question, the authors used a convenience sample of male undergraduate students at a mid-sized, private, liberal arts college. Sixteen male students completed an online 24-question Likert scale survey and nine of these students participated in a semi-structured focus group. Our results support current literature findings showing male preservice teachers experience barriers to the field related to gender identity. Additionally, findings highlight the significant role teacher preparation programs, cooperating teachers, and peer support systems play in the resiliency and success of male preservice teachers. Implications from this research include the need for teacher preparation programs to address these barriers and provide systems of support of this underserved population.

Keywords: teacher preparation, male teachers, perceptions of male teachers

The unicorn is a mythical creature often used to symbolize something rare and magical - like a male teacher in grades K-8. Teaching has historically been viewed as an acceptable career for women and as such the field of education as a whole is female-dominated (Rich, 2014). In grades K-12, 75% of teachers are female; almost 90% of teachers in grades K-6 are female (National Center for Education Statistics, 2021; Rich, 2014). In the United States, just 3.2% of preschool and kindergarten teachers are male (Council for Professional Recognition, 2023). This disparity can be seen across the globe - the United States, Turkey, the United Kingdom, and Australia all report low percentages of men in the classroom at all levels (Anliak & Beyazkurk, 2008; Malaby & Ramsey, 2010). Over time, becoming a high school or college teacher has generally been viewed favorably for male teachers, but pursuing a degree in early elementary

education (EE) or middle level education (MLE) has remained an acceptable career choice only for female students (Malaby & Ramsey, 2010).

Males pursuing elementary teaching positions are often viewed in a negative light by peers and society. They are more likely to be questioned about their choice of career and to have others assume they are not as smart as those who teach high school or are simply looking for an easy career path (Council for Professional Recognition, 2023; Pollitt & Oldfield, 2017). School districts are actively seeking male elementary and middle level teachers to serve as role models for male students (Pollitt & Oldfield, 2017) and to provide a more representative teaching faculty for their students. Yet, societal expectations and gender stereotypes often serve as a barrier to those males who are seeking to enter the field of education, making it difficult to recruit and retain male students in teacher education programs.

Therefore, understanding both the barriers for males entering the teaching profession and the support structures that enable males to persist in the field is critical to increasing the number of male EE and MLE teachers. The following research questions guided this paper:

1. What types of barriers and supports do male preservice teachers in EE or MLE programs encounter in their teacher education program?

2. From where or who do male preservice teachers in EE or MLE programs perceive barriers to persist in the major or entry into the profession?

3. From where or who do male preservice teachers in EE or MLE programs perceive support to persist in the major or entry into the profession?

Literature Review

Understanding the barriers and support structures that male undergraduate preservice teachers experience in teacher preparation programs (TPP) may be considered a black-hole

research topic due to the limited peer reviewed research available within the field. Much of the literature available was published prior to or during the early 2000's. With many of these studies, the generalizability of the findings is limited due to the qualitative nature of the study and/or the international location of the study. A common thread across the literature is a call for further exploration of the factors that contribute to the failure or success of male preservice teachers during their TPP. The following sections share findings from the literature review related to the barriers to the field and the support structures available for these students.

Barriers to the Field

Research states that the three main barriers for male students pursuing EE or MLE certification are the following factors 1) societal views; 2) perceived lack of intellectual challenge; 3) a lack of belonging (Cruickshank et al., 2021; Sargent, 2000; Tucker, 2015). Each of these three barriers will be explained in the paragraphs that follow.

Being a teacher in EE and MLE is seen as "women's work" and is not always viewed by society as a respectable career path for men due to its reputation (Council for Professional Recognition, 2023; Malaby & Ramsey, 2010). Elementary teachers are viewed as a "surrogate mother" (p. 353) and society at large often believes men do not have a "natural capacity for caring" (p. 352) for young people (Lovett, 2014). At the same time, males who do show nurturing characteristics are viewed suspiciously and feared to be sexual predators of children (Cruickshank et al., 2021; Lovett, 2014; Tucker, 2015; Weaver-Hightower, 2011). This viewpoint can be especially prevalent in smaller towns where it is not as common for people to veer from traditional gender roles (Anliak & Beyazkurk, 2008). Male teachers tend to worry about this and avoid contact with children in any capacity, which becomes a Catch-22. They take efforts to avoid any slight signs of impropriety, which potentially leads to colleagues questioning

male teachers' ability to be caring and nurturing (Cruickshank et al., 2021; Lovett, 2014; Malaby & Ramsey, 2010).

Since teaching is seen as women's work, it is often regarded as a low-status profession. As such, wages are low compared to jobs requiring similar educational backgrounds and pay has remained stagnant in the face of inflation (Lovett, 2014; Malaby & Ramsey, 2010; Rich, 2014). Additionally, there are those who view education coursework at the university level as easy and believe men are "too smart" for teaching - that they ought to use their talents in another profession to make more money (Weaver-Hightower, 2011). As a result, there is often an assumption that those who select this career choice are doing so because it is the path of least resistance. Male students may experience ridicule from peers and/or family members as a result of their choice of major and desire to pursue a career in teaching (Anliak & Beyazkurk, 2008; Weaver-Hightower, 2011). This assumption of incompetence has been also observed in teacher preparation programs (TPP), where there may be lower expectations from faculty and cooperating teachers (CT) who assume the male student is not as capable (Pollitt & Oldfield, 2017; Sargent, 2000). Perceptions of ability have also been noted as a reason for exiting the teaching profession (Sullivan, et al, 2022).

When negative societal viewpoints are coupled with challenges surrounding identity development as a male teacher, some EE and MLE teachers report a lack of belonging to the profession (Anliak & Beyazkurk, 2008; Malaby & Ramsey, 2010). Male EE and MLE preservice teachers often have to contend with negative stereotypes and questions about their masculinity (Lovett, 2014). For example, being able to execute and design craft-based activities or cute decorations is often seen as a female quality. For this reason, male teachers in elementary schools are often stereotyped as gay men (Lovett, 2014; Malaby & Ramsey, 2010). Foster and

Newman (2005) refer to the social stigmas related to education as a career choice as "identity bruising." Such outside reactions cause male preservice teachers to have "exit strategies and alternative careers even before their first teaching jobs" (Weaver-Hightower, 2011, p. 107).

Furthermore, as a rarified group, male teachers in EE and MLE are expected to fill certain roles that would be expected of the "ideal" male teacher (like disciplinarian). Some males may not want to be seen solely as a disciplinarian or pursue a position of authority (e.g., a principal). Inaction in filling such a role could cause discord among colleagues (Malaby & Ramsey, 2010; Weaver-Hightower, 2011), which would lead to a sense of isolation. It could also cause undue stress among male educators and/or preservice teachers, making it difficult to retain them in the educational field. Being one of a handful can lead to feelings of isolation or result in biased treatment (Malaby & Ramsey, 2010). These potentially socially awkward situations may lead to anxiety or a sense of otherness for the male teachers (Anliak & Beyazkurk, 2008; Cruickshank et al., 2021; Mistry & Sood, 2013); which may lead to male teachers feeling unwelcome in the field of education.

The trend of questioning male EE or MLE teachers' capabilities and motives simply due to their gender continues to be a barrier to male teacher recruitment and retention, even as school districts actively seek to increase the number of male educators in the classroom (Pollitt & Oldfield, 2017). All three barriers – societal views, perceived lack of intellectual challenge, and a lack of belonging – work in tandem to contribute to struggles of male EE and MLE teachers.

Support Structures

Although there are reasons for males to stop pursuing a career in education, there are reasons they persist. The support structures present as the alternate side of the coin to the barriers described above. Although there are negative societal viewpoints about male EE and MLE

teachers, there is privilege and attention that comes with being part of this group. They often edge out their female counterparts for jobs and enjoy greater job security (Rich, 2014; Weaver-Hightower, 2011). This "glass escalator" often removes male teachers from the classroom into administrative jobs (Shpancer et al., 2019). This results in a greater percentage of males in administrator and principal positions although classroom teachers are predominantly female (Rich, 2014).

Even though males may feel isolated or be viewed as predators, there are so few of them that they are typically more desired for employment because of this rarity. Male elementary teachers believe they can provide a different view of masculinity, which is beneficial for young students and could assist in changing societal viewpoints over time (Pollitt & Oldfield, 2017; Reich-Shapiro, et al., 2021).

Societal expectations and gender stereotypes often serve as a barrier to those males who are seeking to enter the field of education. Mistry and Sood (2013) conducted a review of male early year teachers and leaders in schools and concluded that "stereotypes, perceived or real, of gender inequality, homophobia or identity need to be challenged and addressed by leadership" (p. 10). Thus, the role of mentors and support systems within TTP and school-based settings become essential in the recruitment and retention of male preservice teachers, who are developing their identities as male early elementary or middle level educators (Reich-Shapiro, et al., 2021).

Male preservice teachers are more likely to be singled out during their field placements by teachers and administrators to serve as a disciplinary figure and/or a male role model for students. Although this can contribute to a sense of otherness, male EE and MLE preservice teachers often benefit from the extra attention from school administrators, because they will

receive informal observations and advice during their demonstration lessons at higher frequency than their female counterparts (Tucker, 2015; Sargent 2000). Despite the calls for more male teachers from school districts and experts alike, few males pursue an EE or MLE certification. The support structures do not appear to outweigh the barriers.

Method

Below is a description of our methods for this study, including details about our participants, our survey instrument, and the focus groups.

Participants

A convenience sample was utilized in this study. The participating higher education institution is located in the northeast of the United States. The undergraduate student enrollment is about 4,000 students (46% male and 54% female). Ethnically, the college is about 78% White, 7% Hispanic, and 6% African American. Within the Department of Education, 97.3% of the student population is White. Sixty-eight percent of the full-time undergraduate students receive need-based financial aid. The Education department is one of the largest departments on campus with about 250 undergraduate students in eleven different programs of study. The EE major prepares preservice teachers to teach grades PreK-4, while the MLE major prepares preservice teachers to teach grades 4-8. A dual Special Education (SPE) major adds the certification to teach special education in grades PreK-8. In spring of 2019, 177 students were enrolled in the EE and MLE programs (including the dual SPE majors), which included 139 EE students and 38 in the MLE programs. Altogether, approximately 6% of these students were male. When separated, the MLE programs had a significantly higher percentage of males (13.2%) compared to the EE programs (4.3%).

An invitation to participate in the study was emailed to all of the male students who had declared as an EE, MLE, or SPE dual major. Data were collected over the course of two semesters through an online survey. Out of the 16 respondents, 11 (60%) fully completed the online survey instrument. Of the respondents, there were seven (43%) ECH majors, four (25%) ECH/SPE majors, two (13%) MLE major, and three (19%) MLE/SPE majors. Only one male student of color (0.5% of our sample) elected to participate in the study, and he was the only male of color enrolled in an EE or MLE program.

Demographic questions asked the participants to share the number of semesters completed at the university. Nine (56%) of the participants were juniors or seniors who had completed seven or more semesters at the university. Three (18.75%) were sophomores who had completed three or four semesters. Two (6.25%) had completed two semesters and were classified as freshmen. Three (18.75%) were transfer students completing their first semester and were classified as juniors.

Survey Instrument

The survey instrument employed was the *Barriers and Sources of Support for Male Preservice Teachers Survey* (see Appendix A). This survey instrument was adapted from a questionnaire created by Skelton (2003) for the purposes of having the preservice teachers self-assess their perceptions and experiences during their TPP as a male student. The survey included twenty-four Likert scale items organized into three subscales: demographics, perceptions of teacher preparation, perceptions of field experiences. These subscales were developed based on the characteristics of EE and MLE teachers found in the literature with the intention of assessing the influence of gender bias and expectations on the success of the male preservice teacher throughout a TPP. Descriptive statistics were utilized to analyze the qualitative data.

Focus Groups

Participants indicated their willingness to participate in semi-structured focus groups after completing the survey. Three focus groups were conducted with a total of nine participants: four were MLE or MLE/SPE majors and five were EE or EE/SPE. Half of the participants were in their final semester of coursework, having just completed student-teaching. The semi-structured interviews took place at the end of two semesters following the final exam period. Each focus group lasted approximately thirty minutes and consisted of a similar format, including the use of a narrative open-ended story script (see Appendix B). Asking open-ended questions allowed for the researchers to follow up on participants' comments with additional questions to gather more information about the topic.

Results & Data Analysis

Quantitative data indicated that male preservice teachers perceived the early elementary education or the middle level education profession to be desirable career paths for both male and females (see Table 1). Similarly, the participants overwhelmingly believed that it was vital to recruit both male and female teachers to the field and that sex or gender of the teacher was irrelevant (see Table 1). Only 37.5% (6) of the survey respondents strongly agreed that EE or MLE are well-respected careers, with 31.25% (5) somewhat agreeing and 25% (4) somewhat disagreeing or disagreeing with the statement (see Table 1). This data indicates a discrepancy between the societal viewpoint towards male EE or MLE teachers and the male EE or MLE preservice teachers' own beliefs. Participants were also asked to share their perceptions of the intellectual workload of the career. The majority (62.5%, $n= 10$) of the survey respondents strongly agreed, agreed or somewhat agreed that EE or MLE is as intellectually demanding as

secondary teaching, and overwhelmingly the participants disagreed that EE or MLE teachers are

reasonably paid for the work involved in teaching (69%, *n*=11).

Table 1

Perceptions of EE and MLE Teaching Profession

	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree
EE or MLE is a career equally suitable for men and women	43.75% (*n*=7)	37.5% (*n*=6)	12.5% (*n*=2)	0% (*n*=0)	6.25% (*n*=1)	0% (*n*=0)
EE or MLE is as intellectually demanding as secondary teaching	37.5% (*n*=6)	18.75% (*n*=3)	6.25% (*n*=1)	37.5% (*n*=6)	0% (*n*=0)	0% (*n*=0)
EE or MLE is a well-respected career	25% (*n*=4)	18.75% (*n*=2)	31.25% (*n*=5)	12.50% (*n*=2)	12.5% (*n*=2)	0% (*n*=0)
EE or MLE teachers are reasonably paid for the work involved	0% (*n*=0)	6.25% (*n*=1)	18.75% (*n*=3)	31.25% (*n*=5)	43.75% (*n*=7)	0% (*n*=0)
It is vital that both male and female teachers are recruited to teach in EE or MLE	68.75% (*n*=11)	12.5% (*n*=2)	18.75% (*n*=3)	0% (*n*=0)	0% (*n*=0)	0% (*n*=0)
The sex or gender of teachers is irrelevant in EE or MLE.	6.25% (*n*=1)	31.25% (*n*=5)	37.5% (*n*=6)	6.25% (*n*=1)	18.75% (*n*=3)	0% (*n*=0)
More male teachers are needed as role-models in elementary grades.	31.25% (*n*=5)	31.25% (*n*=5)	37.5% (*n*=6)	0% (*n*=0)	0% (*n*=0)	0% (*n*=0)
Male teachers have a crucial part to play in fostering positive attitudes among boys.	18.75% (*n*=3)	56.25% (*n*=9)	25% (*n*=4)	0% (*n*=0)	0% (*n*=0)	0% (*n*=0)

Survey respondents were also asked several questions related to the perceptions of

society towards male EE and MLE teachers. The majority (69%, *n*=11) of the respondents

strongly agreed, agreed, somewhat agreed that the public tends to be wary of men who work with

very young children. Next, participants shared their perceptions of how schools viewed men who

work with very young children, while only 6.67% (1) participants strongly agreed with this

statement, 46.67% (7) somewhat agreed, and 36.67% (4) somewhat disagreed or disagreed with

this statement. At the same time, the participants shared their perception that more male teachers

are needed as role models in EE and MLE (see Table 1). This data reflects the mixed societal

viewpoints towards male teachers in EE or MLE. Finally, the participants rated their agreement

with the statement "as society changes, men will feel more comfortable about wanting to work

with children." Over 93% (15) participants strongly agreed, agreed or somewhat agreed with this

statement (see Table 2).

Table 2

Perceptions of Society Towards Male EE and MLE Teachers

	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree
Parents are more likely to encourage their daughters to train as K-8 teachers than their sons	26.67% (*n=4*)	26.67% (*n=4*)	31.25% (*n=5*)	6.67% (*n=1*)	6.67% (*n=1*)	0% (*n=0*)
The public tends to be wary of men who work with very young children.	13.33% (*n=2*)	40% (*n=6*)	26.67% (*n=4*)	20% (*n=3*)	0% (*n=0*)	0% (*n=0*)
Schools tend to be wary of men who work with very young children.	6.67% (*n=1*)	20% (*n=3*)	46.67% (*n=7*)	20% (*n=3*)	6.67% (*n=1*)	0% (*n=0*)
As society changes, men will feel more comfortable about wanting to work with children.	26.67% (*n=4*)	13.33% (*n=2*)	46.67% (*n=7*)	6.67% (*n=1*)	0% (*n=0*)	0% (*n=0*)

The qualitative data supports the themes which emerged from the focus group interviews. Three overarching themes emerged from our analysis of the focus group transcripts and survey data interpretation. Each theme is discussed below, combining qualitative and quantitative data gathered by the researchers.

Societal Expectations Contradict the Messages Preservice Teachers Receive From the

School Districts

There is a perception that EE and MLE male teachers are needed to serve as role models for students. Eighty-seven and a half percent of our survey respondents agreed the male teachers were needed as role models within the elementary and middle level buildings. Their experiences in the field reinforced this idea for them. The interview participants shared that their CT would always comment that they would be quickly hired upon graduation. One interviewee stated "a lot of schools are looking for males, so I know that as long as I keep the grades good and do everything right, I have an increased chance over one of my female counterparts" (Interview Participant 3, May 2019). Many graduating students received increased interest from principals and superintendents when it came to hiring practices. These positive reactions from the administrators were affirming for the participants. One student stated "ever since I've been interviewing for jobs and stuff like that, I've noticed that my role and my skills are desired, and that's made me feel significantly better and that has propelled me through this process" (Interview Participant 2, May 2019).

Although they were strongly sought after by districts, there was still a social stigma that infiltrated participants' thought processes. Seventy-five percent of respondents *strongly agreed* or *agreed* with the statement: "The public is wary of men working with children." (see Table 2). The quantitative data was supported by comments from interview participants. There was an underlying message from other stakeholders in education that they, as male teachers, needed to be careful. One student shared his experience when a kindergarten student asked him for help buttoning his pants. He said:

I try not to [help students button their pants]. I try to keep those interactions very

minimal. I just try or if I do, it's right in front of a camera or something. And you

know, most women don't even think twice about that. You tell your woman teacher

to button your pants or zip…go ahead. Women don't even think twice, but with me

I'm like…with my co-op, I'm like, "can you watch?' You know 'cause we have to

save ourselves in that way. (Interview Participant 3, May 2019)

Another echoed "If a little kid asks to help button their pants, I'm doing that as a professional.

I'm not being a creepy man" (Interview Participant 7, May 2019). The data clearly shows that

there is a disconnect between what society says it wants (more male teachers) and how society

actually views male teachers (potential pedophiles). This socially imposed barrier was noted by

participants who felt few males pursued EE certification in part because of the assumption of

pedophilia towards male teachers and the implications that they should have chosen a more

academically challenging career because they are men (Sullivan, et al., 2022; Tucker, 2015). The

participants felt these misconceptions were shared with them by their own families and their peer

group. Plus, they experienced increased curiosity during their field placements, which also

reinforced the social barrier of being a man in EE. Yet, at the same time, the participants all felt

the districts were eager to have them teach in their buildings, especially to help handle behavioral

issues and to motivate learners.

Announced Expectations for Male and Female Preservice Teachers Were the Same, but

Actual Expectations Were Different in Reality

The participants shared strong opinions that good teaching is good teaching. They

recognized that there are different teaching styles but did not attribute these differences to

gender. One participant stated, "everybody teaches differently. You wouldn't be able to find two

teachers that teach exactly the same way, and I think you have to look at each individual person. It's hard to divide it by gender" (Interview Participant 4, May 2019). A majority (62.5%, *n*=10) of survey respondents indicated that they did not feel that the sex or gender of teachers was relevant in K-8 schools (see Table 1). The focus group interviewees felt that in the K-12 classrooms the administration, CTs, and supervising teachers maintained the same standards regarding their lesson delivery and content knowledge. Yet, when asked to share their perceptions about discipline as it related to gender, five (31%) of the participants *strongly agreed* or *agreed* that female teachers have a harder time disciplining boys.

During the interviews, several of the participants shared that female CTs asked them to fill in the male role of disciplinarian and address inappropriate behaviors. One participant shared an experience from one of his field placements where a middle school student was looking at inappropriate things on the laptop and the CT said "Hey you're a male. This might carry more weight if you say this to him. So I got the chance to have that sort of conversation with a student, but it was not a fun conversation" (Interview Participant 1, May 2019). Another participant shared a similar experience of being asked to step in as a disciplinarian: "I think men are looked at a little bit more to even break up fights or control. Like, crowd control…where it's like, he's gonna be able to control that situation better" (Interview Participant 2, May 2019). While the stated expectation was that both male and female preservice teachers would be equally responsible for discipline, the hidden curriculum revealed that males were more often prompted to handle misbehavior in the classroom.

All participants shared that the support of female CTs, who acted as mother figures during their placements by sharing words of caution, mentoring, and acting as a role model for them, played a critical role in their success. They shared that many CTs were surprised by a male

EE or MLE teacher candidate which resulted in more informal observations by teachers and administration, who just wanted to see the male student teacher. "I was the only male in that school besides the gym teacher. And he was getting ready for retirement, so I was a young male to [teachers]. And I walked around that school looking like a unicorn" (Interview Participant 5, December 2019). Although focus group participants claimed there was not a difference between genders, male preservice teachers seemed to receive more support in their field placements.

The study participants felt a disparity in expectations in their college classrooms, where they did not feel their female peers had high expectations of them. One student shared that female peers frequently made comments that he would get a job right away, regardless of his GPA or performance in college coursework, because he was a male teacher. He said:

> It shouldn't be the case. I could get terrible grades and just slack off, and get terrible grades all four years, but they're like, "Oh you're a guy and there's a girl who had a 4.0 and she's got six different references? Fantastic." And I'm just like this, bum, which came out of the education program. They're like "you're a guy, you're in." (Interview Participant 1, December 2019)

The participants experienced other education majors questioning their work and if they had really created their projects. One student shared: "There were many times where I brought in projects and they said, "oh did you get that off Teachers Pay Teachers?" (Interview Participant 4, May 2019). This judgment of their student products ties into the societal perception that the male teachers are underachievers.

Unfortunately, the participants also felt that certain professors seemed to expect the male candidates to be less successful than a female EE major. This held true to a lesser extent for MLE majors. The participants shared instances where they were questioned by a professor about

their major choice. One student stated he was "honestly afraid to speak up" with any doubts he might have because "as soon as you bring up doubts about teaching, their first instinct is like, at least to me, it feels like they say, 'Well, it's not meant for you' (Interview Participant 1, May 2019). This sentiment was similarly expressed by other students who felt some professors were eager to counsel the men out of the major. The participants were surprised, frustrated, and disappointed by the perceived lack of support from their professors. One participant stated "knowing my role as a male, I thought that I would be valued and welcomed, and I thought that other people would be supportive of me" (Interview Participant 3, December 2019). The assumption that the males were less capable translated into the professors' assumptions related to the quality of work. The focus group interviewees felt that there was a pressure to create *cute* classroom activities over creating *effective* teaching materials. One participant defended his position: "Even in Kindergarten most of my stuff wasn't necessarily cute, but it got through to the kids, and my scores showed it." He continued "I was very practical. So the way I teach is not going to be artsy, colorful, and everything, but I'm effective" (Interview Participant 3, May 2019). While the male preservice teachers felt pressure to make things look cute or colorful in elementary classrooms, they strongly believed that the focus should be on the creation of effective teaching materials, not the level of cuteness.

While Sometimes the Male Preservice Teachers Felt a Sense of Collectiveness, There was Still Often a Sense of Otherness

Many male teachers in EE and MLE programs experience a sense of otherness while also feeling a sense of collectiveness and belonging. Collectiveness refers to a sense of belonging to a group (Mistry & Sood, 2013). One respondent shared, "It's kind of a shock at first to see a guy in some of these classes sometimes, but I think everyone's very accepting to us in the classes."

(Interview Participant 2, May 2019). While there was a sense of collectiveness, which developed over time within the TPP as well as out in the districts, there was an underlying current of sexism which remained between the peers. For example, the participants felt judged when they responded to in-class discussions. One student shared a time he brought in an article about a special education topic to share in class and he was "talking about how I got upset by the article, and I teared up and everybody looks at me like, what's wrong? But, why would you cry?" (Interview participant 4, December 2019). While they were qualified educators, the group dynamics shifted when they were engaged with their female peers. The participants revealed that they did not always feel comfortable being the only male in the TPP classes and confided that they sometimes felt singled out by professors. While participants did not feel that they had been discriminated against within the TPP, one participant stated, "I need to always work harder to prove myself" (Interview Participant 6, December 2019). The need to prove themselves in the college classroom or speak from the male perspective is frequently identified as a barrier in the literature (Cruickshank et al., 2021). The sense of isolation and a need to justify their belonging in the EE or MLE major is a barrier to the male preservice teachers persisting in the major.

Discussion

In reviewing the data, there were several key findings, some of which have broader implications for the recruitment and retention of men in EE and MLE. First, the role of teacher preparation programs play in providing a learning environment where male preservice teachers are able to thrive. Second, the perceived barriers the male EE and MLE students must overcome during their TPP. Finally, the perceived support structures essential to their thriving and persisting in the TPP.

Role of Teacher Preparation Programs

The first research question sought to understand the barriers and support structures male preservice teachers in EE and MLE programs experience during this TPP. While academically the participants felt that they were held to similar expectations as the female students, they felt their female peers and professors often questioned their motives and ability to be successful in the EE or MLE program. The skepticism from their peer group was short lived, but professors persisted in questioning their work effort and quality throughout the program. Participants did not indicate that there were any formal support structures present in the program that were unique for male preservice teachers. Similar findings are seen in the research (Cruickshank et al., 2021), where the male preservice teachers self-isolate, choosing the path of least resistance, as a coping mechanism to blend into their TPP. Results indicated that the participants sought out other male preservice teachers within the program creating an informal peer support system.

Despite the many barriers to becoming an EE or MLE, all participants were successful during their TPP. These participants were asked to share their advice with future teacher candidates. Collectively, they stated that if you could survive the TPP, you would be hired and to be proud of themselves and their work. One participant stated, "Just keep moving forward cause your role is important and once you get in the job hunt people are gonna really value you."

Perceived Barriers to the Profession

The second research question sought to understand perceived barriers for male preservice teachers in EE or MLE programs to persist in the major or entry into the profession. Concerns from society, peers, and colleagues raised the scrutiny of the male preservice teachers to behave impeccably. These concerns forced them to constantly be on watch especially with engaging in any sort of physical contact with students. A certain degree of physical contact with students

when teaching early grades is required, as younger students may need assistance with jacket

zippers and buttons as well as this student population tends to be more naturally affectionate,

sharing high fives and hugs. All of these behaviors are naturally assumed by female teachers,

who society expects to be more nurturing, but caring behaviors become a barrier to the field of

education for male preservice teachers, who are often judged with a different standard with

regard to physical contact (Pollitt & Oldfield, 2017). Within this same space exists mixed

messaging as K-12 school districts actively look to recruit male EE and MLE teachers with

caring dispositions. Perhaps it is because of these mixed messages that the participants shared

feelings of surprise that these societal stereotypes were a reality within the TPP and their EE and

MLE field experiences. One student stated:

> I always thought that it was hypocritical, like I hear people say that stereotype… if you
>
> teach in a younger grade, people will be scared of you or you might be a sex predator or
>
> something, And then, also at the same time, people bitch all the time about… 'Oh we
>
> don't have enough male role models or kids don't have people to look up to.

All of the interviewees were hopeful that these differences would go away as more males

decided to become EE teachers. Changing these negative perceptions of the teaching profession,

especially as it relates to males, is a difficult task.

Similarly, a barrier to their success in the program stemmed from lack of acceptance from

their female peers as well as the development of their identity as a male educator. Some of the

negative perceptions towards male EE and MLE teachers that the participants shared came from

male CTs. The interviewees all noted that they had at least one experience with a male CT during

their field experience. They felt the stereotype of the "lazy male teacher" was perpetuated by the

male CTs that they worked with during their field experience who were laid back and

disorganized in their communication and classroom. This same "lazy male teacher stereotype" was how they felt their female peers and professors viewed them. Participants shared experiences during their coursework where they were questioned by female peers if the assignments being submitted were actually their own work.

Another challenge to their identity as a male EE or MLE teacher came from the TPP course professors. The participants shared their perception that the course professors expected the male candidates to be less successful in the program. One interviewee shared "I think they expected me to do poorer on assignments than the female students." The lack of support from TPP professors was a significant barrier to the field from the viewpoint of the participants. TPPs and school districts need to work together to change the negative stereotypes and provide support structures within to help reshape the collective identity of male educators (Cruickshank et al., 2021; Mistry & Sood, 2013; Pollitt & Oldfield, 2017).

Perceived Support Structures

The third research question sought to understand perceived structures for support for male preservice teachers in EE or MLE programs to persist in the major or entry into the profession. The importance of familial, mentor, and peer support in the pursuit of an EE or MLE teaching career has been shown to play a significant role in the decision-making process of choosing to pursue education as a career path (Malaby & Ramsey, 2010). While the study did not find any formal support structures within TPPs designed specifically for male students, the participants were able to identify informal support structures that contributed to their success in the TPP. One source of support came from cooperating teachers and administrators in their field placements, which served as a source of affirmation and motivation to persist in the program. One participant shared that his CT told him "Man, they're gonna snatch you quicker, because

they need more men to interact with the kids." Another candidate shared his takeaway, from being in the field experience placements with CTs and administrators, that male preservice teachers need to just survive the TPP because they are "going to be really valued once they get hired." They also felt and sought out support from each other and (eventually) their female classmates.

These findings echo the findings of Cruickshank et al (2021) whose participants found support amongst their male peers during their classes on campus. The participants' own desire to become EE or MLE educators seemed to be the strongest factor in students' abilities to persist. They persisted in spite of a dearth of formal support structures. Thus, the role of mentors and support systems within TPP becomes essential in the recruitment and retention of male preservice teachers as they develop their identity as a male early elementary or middle level educator.

Limitations

The generalizability of this study is limited due to the small sample size and along with the nature of descriptive research. A second limitation of this study was the validity of the survey instrument. Further research is needed to ensure validity of the adapted survey instrument. However, the findings of this study do inform future research in the field. Replicating the study with other IHEs across the nation would provide valuable insight. While it was beyond the scope of this study, further investigation is warranted to understand: are there differences between males who decide to pursue EE degrees versus MLE? How does race factor into TTP for male preservice teachers? As an underrepresented population in education, male students deserve additional attention. Further research could provide valuable insight that could affect the ways in which male students are recruited to the teaching profession.

Call to Action

The findings of this study contribute to the limited research on the perceptions of male preservice teachers experiences in TPP as well as serve as a call to action. Our participants' advice to future male preservice teachers was overwhelmingly positive and focused on the end goal of becoming certified teachers. The advice was also insightful acknowledging that the barriers are social constructs, which could be changed over time. The voices of these participants highlight the need for TPPs to provide formal scaffolded support for male teacher candidates as they navigate the contradictory messages regarding their major choice. This advice should be a wakeup call to TPPs; male preservice teachers pursuing EE and MLE are expressing their concerns and resiliency, but these students are not experiencing the necessary systems of support from their TPPs. TPPs have an opportunity to develop formal scaffold support systems targeting this underserved student population. Support systems should include structured peer groups of both upper and lower students (providing both social and academic support); mentoring opportunities (e.g., from college professors, practicing male educators, and school administrators); as well as continued support beyond graduation, during the first years of teaching. Partnerships between school districts and IHEs are another pipeline to developing, fostering, and retaining male EE and MLE teachers. It would also be beneficial for TPPs to use their IHE recruitment and marketing tools as a way to build cohorts of male EE and MLE preservice teachers. It is time for TPPs to advocate for their underrepresented male preservice EE and MLE teachers.

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Appendix A

Barriers and Sources of Support for Male Preservice Teachers Survey

Demographic Questions:

1. Current enrollment status for the current semester
    a. Full-time student (12 or more credits)
    b. Part-time students (11.5 or fewer credits)
2. Please indicate the number of semesters completed in college.
3. What is your current major?

Perceptions of Teacher Preparation Questions:

1. K-8 teaching is a career equally suitable for both men and women.
2. K-8 teaching is as intellectually demanding as secondary teaching.
3. K-8 teaching is a stressful occupation.
4. K-8 teaching involves excessive paperwork.
5. K-8 teaching is a well-respected career.
6. K-8 teaching is reasonably paid for the work involved.
7. K-8 teaching provides men and women with the same opportunities for promotion.
8. Men entering K-8 schools are strongly motivated to work with children.
9. Men enter K-8 schools because it provides them with a rapid means of career advancement.
10. Secondary education attracts better qualified students than ECH (PK-4) education.
11. Secondary education attracts better qualified students than MLE (4-8) education.
12. Parents are more likely to encourage their daughters to train as K-8 teachers than their sons.
13. As society changes, men will feel more comfortable about wanting to work with children.

Perceptions of Field Experiences

14. Female teachers often have better communication skills than male teachers.
15. Female teachers are generally more caring than male teachers.
16. Female teachers have a harder time disciplining boys than male teachers.
17. The sex or gender of teachers is irrelevant in K-8 schools.
18. It is vital that both male and female teachers are recruited to teach grades K-8.
19. Students identify more readily with teachers of the same sex.
20. Male teachers have a crucial part to play in fostering positive attitudes among young boys.
21. More male teachers are needed as role-models in elementary grades.
22. Increasing the number of men teaching K-8 will enhance the status of this sector of education.
23. The public tends to be wary of men who work with very young children.
24. Schools tend to be wary of men who work with very young children.

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Appendix B

Focus Group Questions

1. Why did you choose to major in education?
    a. What specifically drew you to the field?
2. What grade/type of school would be your ideal job?
3. What did you expect an education major to be like?
    a. How has your understanding of the major changed?
4. What are some things that have caused you to question whether education is a good fit for you?
    a. What are the drawbacks to being a male in education?
    b. Probe: Specific people (family, friends, faculty), courses, experiences
5. What are some things that made you believe education was a good fit for you?
    a. What are the benefits to being a male in education?
    b. Probe: Specific people (family, friends, faculty), courses, experiences
6. Have you ever felt uncomfortable during your education courses? Why or why not?
    a. Probe specific instances as necessary
7. Do you believe you have experienced discrimination in education because of your sex? Why or why not?
    a. Probe regarding field experience placement
8. Do you believe you have experienced privilege in education because of your sex? Why or why not?
    a. Probe regarding field experience placement
    b. Ask about job prospects
9. Do you think male and female teachers teach differently? Explain.
10. Do you believe your role in the classroom or school will be different than your female colleagues?

Diversifying the Teacher Workforce through a Paid Residency

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Abstract

This paper discusses a teacher residency model that has been collaboratively developed with a mid-sized urban school district struggling with high teacher turnover and a mid-sized university working to support our partner district and provide beneficial clinical experiences for our candidates. In this paper, we provide a brief overview of literature related to teacher recruitment and retention and teacher residency programs, describe our model and its success in recruiting diverse teacher candidates, and describe the successes and challenges of program implementation. We conclude with implications for future practice and research. We hope through this paper to share the benefits and challenges of our particular paid residency model as we work to strengthen approaches to recruiting, supporting, and retaining a diverse teaching pool.

Keywords: teacher retention; diversity; paid residency

Education is an expensive major. In addition to tuition, books, and fees that are typical for all university students, Education majors also spend money on required testing fees, professional attire, and travel to field placements. The final student teaching semester is particularly challenging as students find it next to impossible to work given the requirements and time commitment of being in a school full time.

About five years ago, our institution, a mid-sized university in the southeastern United States, began collaborating with one of our urban school partners to design and implement a paid residency model that would address their consistent need for highly qualified teachers and support our university students financially. Collaboratively developed by the school district and

the university, this clinical model addresses the needs of the local school district but also attracts

student teachers who find the paid nature of this experience beneficial. During the first years of

implementation, many lessons were learned regarding supporting this residency program.

However, all persons involved (teacher candidates, mentor teachers, university supervisors, and

school administrators) found this model to be beneficial to teacher preparation (Rahimi &

Cossa, 2022).

In this paper we provide a brief overview of literature related to teacher recruitment and

retention and teacher residency programs, briefly describe our model, and describe the

successes and challenges of program implementation. We conclude with implications for future

practice and research. We hope through this paper to share the benefits and challenges of our

particular paid residency model as we work to strengthen approaches to recruiting, supporting,

and retaining a diverse teaching pool.

Literature Review

In this section, we provide a review of literature related to teacher recruitment and

retention overall in the field as well as focusing specifically on diversity in the teacher

workforce. We also examine current findings related to teacher residency programs and the

impact they have as a clinical model for addressing these issues.

Teacher Recruitment and Retention

The field of education is experiencing a decline in attracting and retaining teachers to/in

its workforce. One example of this is decreased enrollment in teacher education programs across

the nation. Data analyzed by the American Association of Colleges of Teacher Education

(AACTE) from 2008-2019 (AACTE, 2022) highlights an enrollment decline of more than a third

in teacher education programs, with areas such as special education, S.T.E.M., and bilingual

education seeing the most drastic declines. Data from a recent report published by the National

Council on Teacher Quality (NCTQ) noted enrollment in teacher preparation programs 2020-21

is only 70% of what it was in 2010-2011 (Saenz-Armstrong, 2023). Data from 2022, post-

COVID, shows an increase in both traditional and non-traditional students enrolled in college

and university-based programs as enrollment begins to trend upward but still does not meet pre-

COVID enrollment (Will, 2024). While still focusing on preparation practices, many teacher

preparation programs have placed even greater priority on the critical importance of developing

strategies for teacher recruitment.

In addition to the troubling issue of recruiting teachers, we are also facing a sharp decline

in teacher retention (Darling-Hammond, 2009; Sawchuk, 2016). Current attrition rates suggest

that 20% to 30% of first-year teachers leave the field within the first year (Aud, et.al. 2011;)

particularly those without strong and supportive preparation programs (Guha & Kini, 2016).

Since the pandemic of 2020, data shows that between 33% and 37% of teachers are leaving or

plan to leave in the next two years with current rates nearly as high during the pandemic (Bryant

et al., 2023; Choi, 2023). There have been findings suggesting that five-year turnover rates for

teachers in high-poverty or "hard to staff" schools are between 50%-55% (Ingersoll, 2012;

Muñiz, 2020; Papy et al., 2017). The statistics are even more alarming when noting that over

55% of current teachers are considering leaving the profession prior than they had planned, up

almost 20% from a survey only months prior (Walker, 2022). Low salaries, poor working

conditions, stress related health concerns, and inadequate preparation have been identified as

leading the reasons for teachers not staying in the profession, creating a crisis in our field (Guha

et al., 2017b, Walker, 20222). Bacher-Hicks (2023) notes that the pandemic has increased

attrition by 17% in many cases. Although there are enough students enrolling in teacher

preparation programs to address retirements, the number of candidates is not sufficient to replace teachers quitting early in their careers (Will, 2024).

The issues of retention and recruitment are particularly burdensome for high-needs or "hard to staff" rural and urban schools, such as the ones involved in our paid residency partnership, with these schools plagued with the highest rates of teacher attrition (Carver-Thomas & Darling-Hammond, 2017; Darling-Hammond, 2010; Freedman & Appleman, 2009; Guha & Kini, 2016). As these school settings are faced with the greatest teacher shortages (Ingersoll, 2012; Marshall & Scott, 2015) and recognizing that outcomes for students are positively impacted by teacher retention (Boyd et al., 2005; Guha & Kini, 2016), the students in these schools do not have access to equitable educational opportunities, an issue that needs to be fervently addressed.

Further, there is a lack of teacher diversity in the workforce. According to data from the National Center for Education Statistics (NCES), the diversity of the teacher workforce is not even closely aligned with the diversity of the student population. According to NCES, in 2017-2018, fewer than one in ten teachers were either Black, Hispanic, or Asian American; this is in stark contrast to the non-White student population, which in 2020 was 54% (NCES, 2022). This lack of diversity in the teaching force is a critical issue as research suggests that students benefit from engaging with a diverse teacher workforce (Guha & Kini, 2016; Villegas, 2010). In particular, "racially and ethnically diverse teachers tend to be rated highly by students from all racial and ethnic backgrounds, and research has shown the benefits of same-race teachers include better test scores, college attendance rates, and disciplinary outcomes" (Muñiz, 2020, p. 7). Therefore, it is an imperative that teacher preparation programs continue to focus on recruiting and retaining a diverse field.

Recent publications have begun to survey and assess the financial obligations and barriers for teacher candidates in programs throughout the country. As previously stated, financial obligations incurred by teacher candidates go beyond tuition to include preparation exams, background checks, and field experience costs, including transportation and professional clothing (DeMoss & Mills, 2021; Schack & Burton, 2020). To aid in paying for costs incurred throughout their degree program, many Education majors work full time throughout college (DeMoss & Mills, 2021, para 3; Mansukhani & Santos, 2021). Furthermore, teacher candidates report a significant financial burden of a semester-long student teaching experience, which does not offer time for paid employment (Will, 2024). This is exemplified by the data that demonstrates that non-traditional or racially diverse students often have obligations of caring for family members or serving as heads of households (Dennis, et al., 2021; Muñiz, 2020), while over 20% of candidates report supporting dependents. When exploring the barriers to completing a degree with a full student teaching semester, students in a recent survey noted that the highest areas of anxiety included time for personal responsibilities, time for self-care, paying for tuition, and monthly expenses (Mansukhani & Santos, 2021). More recent data exploring the demands on Education students highlights the obligations of family and finances for non-traditional learners with families and students of color that are barriers to completing a degree.

One consideration in addressing the recruitment and retention of diverse candidates that can support the needs of diverse student populations is to focus on designing and implementing creative, meaningful clinical practice experiences for teacher candidates (Dennis et al., 2021; Mansukhani & Santos, 2021; Jung, 2010). Effective clinical experiences for teacher candidates are critical for their preparation and impact their retention (Jung, 2010; Van Zandt Allen, 2013). Therefore, concentrating on clinical practice as a means to recruit and retain teachers is a

promising approach.

Teacher Residency Programs

One clinical experience model that has been drawing a great deal of interest for its potential to offer authentic and meaningful experiences for teacher candidates is the teacher residency model (Henning, 2018; Henning et al., 2018; Marshall & Scott, 2015). Teacher residency programs offer an opportunity for teachers-in-training to become immersed in the school (and its culture) while also benefiting from intensive mentoring (Thorpe, 2014) and having the added benefit of support from university faculty.

While there is a wide range of structures and implementation models of residency programs (Washburn-Moses, 2017), teacher residency programs typically involve teacher candidates who are working toward licensure while simultaneously taking coursework aligned with the clinical practice. Such programs involve district-university partnerships in which Colleges of Education and their respective partner districts collaborate throughout the process of developing such residency programs (Guha et al., 2017). One other general key feature of teacher residencies, like the one featured in this paper, is the important emphasis on the role of mentors for each teacher candidate. Focusing on mentoring has been found to be a particularly impactful practice for preparing and training teacher candidates and lends itself to the retention of teachers once hired (Chan, 2014; Van Zandt Allen, 2013). Darling-Hammond (2010) points out that the lack of mentoring and support contributes to the "root problems of teacher attrition" (p.20). As we will note later in the paper, this feature of the residency program we discuss has been particularly effective (Rahimi & Cossa, 2022). While the traditional student teaching model allows teacher candidates to engage in mentorship relationships with their classroom teaching supervisor and university supervisor for a semester, in many residency programs such as ours,

teacher candidates receive this level of mentoring during their actual first year of teaching while assuming all the professional responsibilities of a full-time teacher (Carver-Thomas & Darling-Hammond, 2017; Guha & Kini, 2016; Muñiz, 2020).

While there is only an emerging body of research on teacher residencies, there appears to be evidence that the teacher residency model offers benefits to teacher candidates' preparation and K-12 student learning (Guha et al., 2017). Early research suggests immersion in year-long residencies better prepares teacher candidates as they enter the field, thus leading to their retention in K-12 settings (De Jong et al., 2013; Hascher & Hagenauer, 2016). Specifically, a year-long residency program offers "recruits strong clinical preparation specifically for the kinds of schools in which they will teach" (Guha & Kini, 2016, para. 3). DeMoss, et al. (2018) note that education preparation programs now have higher expectations for the "intensity, duration, and focus of clinical practice education" (p. 8) such as those programs found in other countries. Assistance to meet these high levels of expectations through preparation programs is further supported by aligning expectations and programs at the school and collegiate level (Muñiz, 2020). In her work, Darling-Hammond cites researchers who have noted teacher retention rates of over 85% after four or more years for graduates of programs featuring teacher residencies (Berry et al., 2008; Hammond, 2010). Universities and school systems across the nation are currently realizing the potential that residency models have for retaining teaching staff.

In addition to the potential impact of residency programs on teacher retention, the salient benefit of teacher residencies is supporting the recruitment and retention of teachers of color, thus contributing to the diversity of the teacher workforce (Azar et al., 2020; Coffman & Patterson, 2014). Guha et al. (2017b) noted in their work that in 2014-2015, 45% of graduates

from residency programs were people of color. That greatly surpasses the national average of

teachers of color, which is currently around 18% (Azar et al., 2020). As noted above,

diversifying the teacher workforce should be a critical objective for teacher preparation programs

(King, 2022; Villegas, 2010). Providing students access to a diverse body of educators benefits

all students by providing positive role models, more culturally responsive practices, and students

who are less likely to maintain implicit bias (Bond et al., 2015; Carver-Thomas, 2018). Our

model did not set out initially to *specifically* attract teachers of color; however, it is a noted and

powerful outcome of our program.

  In the following section, we will describe our residency program, the roles of the various

personnel involved, the make-up of students it has attracted, and current retention rates. We

conclude by sharing some challenges we face in sustaining this model, and recommendations for

research in this area.

Description of Our Paid Residency Model

  As mentioned earlier, our paid residency model was co-developed by members of faculty

and administration from our College of Education and members from the local urban school

district we serve. It is structured as a triad with one designated mentor teacher who supports two

residents within the same school building. The mentor teachers play a particularly critical role in

our model as they do in most teacher residency programs (Chan, 2014; Van Zandt Allen, 2013).

Residents are hired by the school system as teachers of record and follow the orientation and

induction schedules of first-year teachers in their respective school systems. Residents are

required to engage in all of the duties and responsibilities of first-year teachers and members of

the school community. They are compensated with an annual salary of approximately $19,000

(which is a split salary of a first-year teacher in this district), health benefits, and time toward

state retirement. The mentor-teacher continues to receive his/her salary through the school district. This structure was designed for its potential to provide ongoing support for residents and its financial viability for school districts.

With the initial success of the paid residency in an urban school district, our model, described in this paper, has been replicated in two of our partner rural districts, which also find themselves dealing with issues of recruitment and retention.

As a result of these two partnerships, we are currently working with seventeen paid residents in two school systems (see Table 2). While most of our teacher candidates choose a traditional path to "student teaching", a fifteen-week clinical experience in which they work directly with a classroom teacher as their clinical supervisor with routine observations conducted by a faculty member from our university programs, our paid residency is an option available to our undergraduate teacher candidates.

In the development of our model, it was recognized that there are two critical processes necessary for its success: the selection of teacher residents who could be successful in this model and the selection of the mentor teacher who could serve as strong academic and professional support for our teacher residents. While our College of Education assumes a leading role in the selection of the teacher residents, and the school system leads the selection of the mentors, both participate in each process. Involvement and communication throughout ensure that we are selecting and supporting high-quality candidates that exhibit academic and dispositional aptitude for the challenge of this experience and skilled mentors who can positively impact student learning.

Selecting Residents and Mentors

Because the teacher residents will be simultaneously full-time students and full-time teachers, it is important to recognize that this program is not optimal for all teacher candidates, thus this is an optional experience for our teacher candidates. Interested candidates undergo a selection process that ensures the teacher candidates participating in this model excel academically (demonstrated by GPA) and in their field placements (clinical observations). Similar to the traits of effective teachers, selected teacher candidates need to possess the professional dispositions of effective educators (i.e., organization, commitment to supporting diversity, effective written and oral communication skills and professionalism; Hayes et al., 2023) Further, they must also be willing to commit to the additional time requirements of this program as their academic year follows the public school calendar, not the university calendar.

To select high-quality candidates who have the potential to be successful in this challenging program, we developed and implemented a multi-step application process. Teacher candidates who have completed most university coursework or who have the ability to take additional courses in the summer can submit an application. Applications include a cover letter, resume, and an essay outlining their teaching philosophy. These materials, along with teaching performance evaluations from clinical experiences and professional disposition evaluations completed by faculty, are reviewed by program faculty. Candidates who receive initial program approval are then asked to participate in an in-person interview with both program and college faculty and staff. The interview is a critical component of the selection process (Kwok et al., 2023; Rutledge et al., 2008). We use this interview also as an opportunity to reiterate the demands of the paid residency program. Materials from candidates performing well in the interview are then shared with the district human resources staff and the principals of the

respective district-designated school sites. Principals who will be hosting residents then review

materials and select candidates to interview. This interview team typically consists of a

representative from the district's Human Resources office, the building principal, the mentor

teacher on site, and at least one representative from the university. While this process is

intensive, it does help ensure that we select teacher residents with the potential to succeed and

that the collaborative nature of this process is maintained.

Selection and Role of the Mentor

Although we work to select high quality candidates committed to this experience, we

recognize their success can be dependent on the quality of their mentor (Goldhaber et al., 2020;

Ronfeldt et al., 2018). Prior to becoming hired as mentors in our model, the mentor-teachers

were lead teachers in their building and possess qualities of effective teacher leaders and mentors

(Callahan, 2016), as deemed by their respective principals. Mentors are hired through the school

district. The principal reviews materials and selects potential mentor teachers to participate in the

interview process. This interview team consists of the principal, a representative from the

district's HR office, and at least two members from the College of Education faculty.

Once selected, the mentor is then tasked with supporting two teacher residents teaching

in the same school building. Ideally, the mentor teacher spends approximately half of the day in

each resident's classroom supporting them by modeling instruction and assessment, helping with

administrative tasks, integrating residents into the school community, demonstrating working

with family and other personnel, and serving to support the candidates' needs. We have noted

that it is critical that there is principal buy-in related to the importance of this mentor teacher's

role. They should not be tasked with any additional duties that may take them away from their

primary role of serving the teacher candidates.

The Role of the University Supervisor and Program Faculty

In addition to the assigned district-employed mentor, the residents in this model are also assigned a faculty member from the College of Education to serve as the university supervisor, similar to teacher candidates in more traditional student teaching experiences. (Goodnough et al., 2009). The triad existing among the university supervisor, mentor, and resident serves to foster communication and relationship building throughout and is critical to the success of this model.

Teacher residents need support before the semester begins and beyond what is typical from university supervisors throughout the fall semester, as residents are full time teachers and full-time students while simultaneously beginning a new career (Roegman et al., 2016). Part of that support entails regular and ongoing communication with the mentor teacher about instruction, curriculum, and school requirements before the start of the residency program. It also entails ongoing communication so that university course requirements and assignments align as much as possible with each school's teaching expectations. This level of consistent communication allows us to make concrete connections between theory, best practices, and the daily work teacher residents are engaged in. In some cases, working as a triad supports a candidate to identify areas of difficulty and brainstorm solutions based on the candidate's particular needs and level of development.

The university supervisor works closely with the teacher resident and the mentor teacher throughout this experience. The university supervisor is the first point of contact for the university once the experience has begun. They are also responsible for observing the teacher candidates at least six times throughout the semester and engaging in pre-post observation conferences with the teacher resident and mentor teacher. As we have expanded to two additional school systems that have differing curriculum and teaching expectations, this level of

communication is critical as the university supervisor is able to relay school system expectations to methods course instructors so they can tailor their assignments to best meet the needs of teacher candidates and the K-8 students they serve.

Initial Outcomes

One of the goals of residency programs is to recruit and retain a more diverse workforce (Azar et al., 2020; Coffman & Patterson, 2014), and our model provides evidence of this possibility. While we did not directly target any particular student group for participation in the paid residency program, students who chose to participate, submit an application, and are selected for this residency program have been diverse in gender and race, particularly in comparison with our overall College of Education student population. When analyzing the demographic characteristics of the first cohorts of residency applicants, we began to recognize an important trend among those teacher candidates. Albeit not originally designed to do so, one exciting outcome we noted is that the applicants attracted to our residency program are more diverse in terms of race and gender when compared to our overall candidate population. This trend has continued with subsequent cohorts of applicants, leading us to be encouraged by the possibility this model has for attracting a more diverse teacher pool. Further, we noted that the majority of our teacher residents have remained in the schools where their residency occurred, and these are sites that have historically experienced high teacher turnover. Of the six teacher residents who completed their residencies in the first two years, four have remained in teaching positions at the sites where they completed their residencies.

For example, while only 32.5% of our College of Education undergraduates are non-White, 41.2% of our paid residents are non-White. When looking at the national demographics of teachers as of 2021-2022, these numbers are even more impressive. According to data

provided by the National Center for Educational Statistics on the teaching population in 2021, of

teachers, 80% are White, nine percent are Hispanic, and six percent are Black (NCIS, 2023). Of

particular note is the large number of first-generation college students participating in the

residency program. Additionally, our paid residency appears to attract more male candidates than

the college and national average. Table 1 details the demographics of teacher residents during

our first four years, and Table 2 details the demographics of our current cohort. Table 3 details

the demographics of the overall population of our teacher candidates.

Table 1

Paid Resident Demographics 2019 - 2022

Paid Residency Program	*Gender*	*Race/Ethnicity*	*First Generation*
17 residents	14 Female	7 Black	7
	3 Male	10 White	
Percentages	82.4% Female	41.2% Black	41.2% First Gen College
	17.6% Male	58.8% White	Students

Table 2

Paid Resident Demographics 2023

Paid Residency Program	Gender	Race/Ethnicity	First Generation
17 residents	13 Female 4 Male	7 Black 1 Latinx 9 White	*10*
Percentages	76.5% Female 23.5% Male	41.2 % Black 5.9% Latinx 52.9% White	58.8% First Gen College Students

Table 3

College of Education Demographics 2019 to 2023

	Gender	Race/Ethnicity	First Generation
1109 Students	964 Female 105 Male	223 Black 67 Latinx 753 White	268
Percentages	86.9% Female 13.1% Male	20.1% Black 6% Latinx 67.9% White	24.1% First Gen College Students

While our program is relatively new, and our numbers are small, they do represent a positive trend in appealing to a diverse teacher workforce. As evidenced in the charts above, our residents are more varied in terms of gender, race, and access to college in comparison with the overall population of College of Education candidates, both at our institution and nationally.

The tables above represent the diversity of our candidates, but they only illustrate part of the story. It is also important to note that in most instances, the teacher candidates who selected the paid residency were students who were working full-time jobs or two part-time jobs throughout their undergraduate studies (Rahimi & Cossa, 2022). Thus, this paid residency program allowed them to be able to earn a salary while completing their clinical practice, making this an attractive opportunity for "non-traditional" students who have additional financial obligations and/or are not the typical age of a college junior. It should also be noted that many of our residents are also members of the military, single parents, and/or older aged students.

In our fifth year of program implementation, we have the same number of teacher residents as we did in the previous four years combined. While the pandemic definitely played a role in lower numbers in our second and third years, it is our development and refinement of processes, support, and procedures along with the success of our teacher residents that have been instrumental in additional districts and schools joining the program.

Challenges and Possibilities

As mentioned previously, a noteworthy goal of many teacher preparation programs should be to attract and prepare diverse students while ensuring successful educational experiences for students in the K-12 setting. Through the establishment of programs that encourage paraprofessionals to enter the teaching field and adapting coursework to address the needs of working adults, we are hoping to continue to increase the diversity of our candidate population. The paid residency is another initiative that has served to support our diverse candidates.

To ensure that the paid residency is an optimal experience and is sustained, we offer support at several levels. This requires the involvement of various College of Education

programs, university faculty, and staff. We begin promoting our paid residency program among sophomore level students to aid in planning for the implications of scheduling, possible summer courses, and time management. Another way we support our paid residents is to offer a waiver for the first semester of their senior year. This allows for our seniors to be considered full-time students while taking fewer semester hours. This waiver ensures the student can prioritize time as a resident, lessen the stress of multiple obligations, and be eligible for financial aid if necessary. If a candidate still needs content courses in another college such as an upper-level history or science course, participation as a paid resident may not be an option if course offerings are limited. Therefore, we encourage planning for the residency program prior to an application.

In addition to minimizing coursework during the first semester of the paid residency program, changes had to be made in the delivery of courses by faculty. At our institution, we have offered both independent studies over the summer as well as adjusted for evening coursework to accommodate our residents specifically. A benefit to these changes includes the ability of an instructor to tailor readings, planning, and assessment for the upcoming teaching experiences of the residents. This has allowed for planning and a deeper understanding of the job-embedded requirements that the resident faces. In addition, by having coursework delivered in the evenings, the faculty can model best strategies and scaffold learning experiences to support areas experienced by the residents in their classrooms, exhibiting a strong theory-practice relationship. We have found that courses tailored specifically for the needs of our residents have been particularly effective in supporting them during their first year (Rahimi & Cossa, 2022).

However, it should be noted that offering alternative sections of courses to meet the time constraints of paid residents has financial and time impacts on the college and course instructors.

It is known that the number of students in colleges and universities is declining by up to five or ten percent nationally (Dickler, 2022; National Student Clearinghouse Research Center, 2022), and those responsible for monitoring university budgets turn a critical eye on student enrollment in courses. To offer a section of a methods course or content course for less than five or ten students becomes an economic strain on the university. Faculty who teach these "low-enrolled" courses often do so as a partially paid overload or are required to take on additional sections. Although the number of students is small, the time to plan, assess, and deliver these classes remains relatively the same as traditionally enrolled courses. Further, as mentioned earlier, there are additional time commitments from the university supervisor who often extends beyond the university semester to support residents from the first day of school through the final day.

Scheduling and staffing are challenges of our paid residency program, yet those challenges have also created opportunities for meaningful discussion regarding instructional and pedagogical practices for all students. One example is that our secondary education program has adjusted a typical methods course to occur earlier in the program of study to provide all students content specific pedagogy earlier in the program. Beginning teaching without having taken the critical methods course was seen as a deficit in the paid residents as well as all typical student teachers (Rahimi & Cossa, 2022). Solutions such as offering sections during the summer have not only helped the paid residents but other teacher candidates seeking to lessen credit hours during their senior year. The summer sections can provide more focused feedback and time to focus on pedagogy. These pedagogical and curricular adjustments have been viewed positively and have created opportunities for our diverse student populations to thrive in our programs. As these may be issues specific to our preparation program, it is worth noting that others looking to develop paid residencies need to consider their own unique circumstances of curriculum

offerings to support the needs of their teacher residents.

Further, residents in this model indicate that the year-long support they receive from a mentor developed their confidence and skills when they began teaching independently the following school year. Not only were they able to navigate the learning management and assessment systems on the first day, they knew how to "really use the data to plan lessons for small groups" and "share how students are progressing with parents". They felt confident "sharing ideas during grade level planning" and working with counselors and other school personnel when additional support was needed for students or families. This program prepares effective educators, and it makes their teaching career possible. While most residents concur that the residency program is "probably the most challenging thing [they] have ever done", without it, many would not have been able to complete their teaching degree.

Implementing this model warrants researching its viability and its impact on student learning in K-12 classrooms. Future research will focus on the experiences of all constituents involved in this model: students and their families, the mentors, the building administrators, and the teacher candidates. We are hopeful that this model has great potential for impacting student learning. We hope to monitor and research this model as it grows and continue to monitor its long-term impact on recruitment, retention, and student success.

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From the Top of the Class to the Front of a Classroom: Student Perceptions of the Teaching Profession at a Highly Selective Liberal Arts University

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Abstract

Teacher education programs at small liberal arts colleges and universities are among the most vulnerable to decreased enrollment, yet they are uniquely positioned to provide well-rounded future teachers and educational leaders for a democratic society. To inform recruitment efforts, this study examined students' perceptions of teaching careers and their motivations to study education at one small, highly selective liberal arts university. Findings suggest students perceive the teaching profession as honorable but lacking prestige. Their decisions to study education were impacted by personal desires, institutional structures, and professional structures. Findings offer insights into improvements that small college and university teacher education programs can make to attract and retain future teachers and develop thriving, innovative programs.

Keywords: teacher education, teacher recruitment, liberal arts

Liberal arts colleges have long been involved in teacher preparation (Yacek & Kimball, 2017), though they are often overshadowed by larger public universities' teacher preparation programs (Bjork et al., 2015). Liberal arts colleges are uniquely positioned to prepare future teachers and educational leaders in a democratic society due to the breadth and depth of their curricular focus and admissions selectivity (Bjork et al., 2015; Wilkins, 1931; Yacek & Kimball, 2017); however, negative perceptions of teaching careers among high-achieving students and skepticism towards teacher education programs by liberal arts university administrators present challenges to the sustainability of such programs (Mancenido, 2021; Yacek & Kimball, 2017). For these reasons, some undergraduate teacher education programs at liberal arts colleges and universities have been ended, including programs at Denison (Bjork, 2015), Chicago (Bronner,

1997), and Harvard (Roberts, 2022). When positioned within a context of the broader professional crisis of teacher recruitment and retention, questions are raised about the viability of collegiate teacher education and, specifically, the vulnerability of the smallest programs. Knowledge of the factors that influence students' decisions to study education and pursue teaching certifications at small liberal arts colleges and universities can be useful for developing institutional or programmatic plans that assist in the recruitment of and investment in the nation's highest achieving students as future teachers.

Context – Teacher Shortage Crisis

The United States faces a massive shortage of qualified teachers. Nearly half of all public schools in the US have vacant positions (National Center for Education Statistics, 2022). There are an estimated 55,000 unfulfilled teaching positions, and underqualified teachers are filling an additional 270,000 positions (Nguyen et al., 2022). This includes at least 4,300 vacant positions in Virginia (Joint Legislative Audit and Review Commission, 2023). The teacher shortage is due, in part, to fewer college students choosing to study education. Fuller (2023) reports that nearly a quarter million fewer students enrolled in teacher preparation programs nationwide in 2021 compared to 2009; Virginia is ranked in the bottom five states with the largest decreased enrollment (-55.7%).

Student perceptions of teaching is a factor in decreased enrollment. Students report viewing teaching as a profession with lower prestige and salary than other licensed professions such as medicine, law, and engineering (Ingersoll & Mitchell, 2011). High-achieving students often view teaching as an inappropriate career choice (Mancenido, 2021). Consequently, few of America's highest achieving students enter the profession (Wilson, 2011); and elite liberal arts colleges are less likely to offer teacher preparation programs than other schools (Reback, 2004).

Yet, scholars suggest attracting top students to careers in teaching could lead to extraordinary results in teacher effectiveness, like that seen in Singapore, Finland, and South Korea (Auguste et al., 2010). If the US hopes to meet the rising need for qualified teachers, then it is salient to consider the value and impact of multiple types of teacher education programs, including the potential for small teacher education programs at liberal arts colleges to attract high-achieving students and future leaders in education.

Literature Review

Since the birth of normal schools in the mid-19th century, teacher education in the US has developed into a broad, varied arena with initial professional licensing being obtainable through state-approved programs at many different types of colleges and universities. This includes small departments of education at private liberal arts institutions that are often overshadowed by larger university programs (Bjork et al., 2015). Several vulnerabilities exist at small liberal arts programs that are not present to the same extent at larger universities (Bjork et al., 2015; Yacek & Kimball, 2017). For example, in Virginia, there tends to be fewer program completers at liberal arts colleges than the number of completers at larger universities (Virginia Department of Education, 2022). Logically, it follows that fluctuations in enrollments have potential to impact the ability of smaller programs to offer courses, hire support staff, and withstand administrative cuts. This is particularly concerning when viewed in the context of their already tepid existence as professional programs at liberal arts colleges (Kimball, 2013).

Teacher Education at Liberal Arts Colleges

From the start of collegiate teacher preparation in the United States, questions were raised about whether liberal arts colleges should engage in teacher education (Kimball, 2013). The most common critique stems from the idea that the mission of a liberal arts education differs from

professional preparation or other vocational types of training (Kimball, 2013). This conceptual

difference plays a factor in why teacher education programs at liberal arts institutions "are

regularly submitted to skepticism and marginalization at the hands of administrators" (Yacek &

Kimball (2017, p. 4). Similarly, this marginalization mirrors the way that the highest-achieving

students are socialized, explicitly and implicitly, by society to view that teaching is not a suitable

career choice for them (Mancenido, 2021).

    There are a multitude of reasons for the inclusion of teacher education at liberal arts

institutions. For one, it is commonplace for other types of professional preparation programs to

be offered at such institutions, including journalism, accounting, and business administration, as

well as graduate studies in law or medicine (Kimball, 2013). Additionally, a strong moral and

prudential case can be made for teacher education at liberal arts colleges based on common

institutional missions to contribute to local communities, society, and the political economy of a

democracy (Kimball, 2013; Wilkins, 1931). Moreover, the inherent role of teachers as

intellectual leaders aligns well with the scope of knowledge gained through the liberal arts.

Illuminating this point, Yacek and Kimball (2017) suggest "the liberal arts and teacher education

become intrinsically complementary enterprises" as they can create liberally educated teachers

and not merely skilled actors (p. 7).

    In an adamant defense of teacher education at liberal arts colleges, Ernest Wilkins (1931),

former president of Oberlin college, wrote that the broad education of citizens in a democracy

requires the utmost attention from all types of colleges and universities. Furthermore, Wilkins

(1931) wrote, "The (teaching) profession by its very nature calls for men and women of

exceptional ability and personality… The privately endowed liberal-arts college is in a peculiarly

good position to exercise such selection" as these institutions already have in place selective

admissions processes (Wilkins, 1931, p. 583).

Research on teacher education programs at modern liberal arts colleges is limited, though

one professional organization, the Association of Independent Liberal Arts Colleges for Teacher

Education (AILACTE), aims to share "concerns, issues, and viewpoints in teacher education as

they pertain to member institutions" (AILACTE, 2024, para. 2). AILACTE annually publishes a

journal aimed at enhancing teacher education at private liberal arts institutions. A review of

published articles from the past five years reveals no studies directly addressing student

recruitment, perceptions of teaching, or the sustainability of teacher preparation programs at

liberal arts institutions. However, Peacock's (2020) Liberal Arts Teacher Education (LATE)

framework, a four-dimensional agenda aimed at comprehensive teacher preparation, is suggested

as a tool to "facilitate recruitment" of teacher candidates (p. 3). Recent AILACTE articles tend to

deal with pedagogy, such as writing instruction (Thomas & Wheeler, 2022), disposition

development (Young et al., 2022), and virtual learning (Baliram et al., 2021; Shedrow, 2021),

more so than examining programmatic structures.

High-Achieving Students Becoming Teachers

Research suggests recruiting top performing students into teaching careers could lead to

increases in K-12 student achievement (Hanushek et al., 2019). Only 23% of teachers come from

the top one-third of college students (Auguste et al., 2010). With fewer teacher education

programs at elite colleges (Reback, 2004), fewer top performing students seek to become

licensed teachers. Some students choose non-credentialed alternative pathways to teaching. For

example, Teach for America (TFA) is a non-profit organization that recruits, trains, and deploys

students from the nation's top colleges to teach for two-year periods in low-income schools. TFA

candidates do not have to be licensed teachers or have collegiate studies in education. TFA

recruits heavily at many of the nation's top liberal arts colleges. In Virginia, Washington and Lee

University and the University of Richmond have made TFA's list of top contributors within the

last decade (TFA, 2014). TFA is highly selective, accepting between 11-15% annually, giving it

an air of prestige among college students at the nation's top schools, though its recruitment has

dwindled in recent years (Berman, 2023). Relatedly, TFA has faced criticism for underpreparing

its candidates and producing high staff turnover at its schools (Thrush, 2023).

　　　　Since enrollment in teacher education is decreasing nationwide and the ability for high-

achieving undergraduate students to pursue collegiate licensure programs is suspect, concerns

have been raised about the sustainability of existing small teacher education programs.

Understanding liberal arts college students' perceptions of teaching careers and motivations for

choosing to study or not study education can illuminate the ways these small programs might be

responsive to their students and lead to innovations in recruitment to, not only survive, but thrive

on their campuses.

Method

　　　　Washington and Lee University (W&L), in collaboration with a neighboring small liberal

arts college, offers a nationally accredited educator preparation consortium that results in

professional teacher licensure in 21 endorsement areas, including elementary, vocal and

instrumental music, several world languages, and multiple middle/secondary content areas.

W&L is considered a highly selective university with an acceptance rate of approximately 17%.

Since prior research suggests students at highly selective liberal arts universities are less likely to

pursue teacher licensure than students at other universities, and since W&L's educator

preparation program competes with on-campus recruitment efforts by alternative programs like

TFA, the researchers were interested in uncovering the motivations that underpin students'

decisions to study education and pursue teacher licensure while an undergraduate student at the

institution.

This study sought to answer two specific, interrelated research questions:

1. How do students at a highly selective liberal arts university perceive careers in

    teaching?

2. Why do these students choose to pursue or not pursue careers in teaching while an

    undergraduate?

Researcher Positionality

Bourke (2014) suggests researchers should interrogate their positionality, or their

identities that interact with the setting and participants, to make apparent biases. The authors of

this study are intimately connected with the students and program under investigation. One

author is the program director and a faculty member, the other is also a faculty member in the

program. Both authors were educated in large public universities' teacher education programs

and worked as public -school teachers prior to their current roles. We acknowledge that these life

experiences influenced our personal decisions to become teachers. We view our biographies as a

strength as they produce positions from which to relate and constructively interpret students'

responses based on unique life contexts. Similarly, the authors' faculty status enabled the

crafting of relevant questions based on insider knowledge. The potential negative influence of

this closeness to students was mitigated through ensuring respondents' anonymity.

Research Design

The research project adopted a self-study methodology to examine the authors' own

"professional practice setting" (Pinnegar, 1998, p. 33). Self-studies of this nature provide a

constructivist and collaborative lens to form context-specific understandings of the research questions (Beck et al., 2004). In applying this methodology, focus was given to understand the specific factors that impact the students at W&L. Dually, the self-study methodology enabled program reflexivity and responsiveness to the findings. A later section of this article will describe programmatic changes due to the results of this study.

While W&L takes part in a teacher education consortium with another small liberal arts college, the researchers decided that the participant pool would only include students enrolled as full-time undergraduates at W&L. This decision was due to the highly selective admissions process at W&L and the desire to understand specific institutional and cultural factors at the university that may not impact students from the partner institution in the consortium.

Data were collected via electronic questionnaire (Appendix A). The questionnaire contained both open and closed response items. It was sent to approximately 85 undergraduate students. These students were selected based on the criterion that they were active undergraduate students that were currently enrolled or had been enrolled in at least one education course during their time at W&L. Thirty-five students responded to the survey for a 41.2% response rate.

Closed-response questionnaire items were analyzed through measures of frequency. Open-ended items were analyzed independently by each researcher through open coding of written responses. The researchers then collaborated to compare their codes and negotiate disagreements. This type of coding technique strengthens the reliability of the findings (Strauss & Corbin, 1990). Codes were categorized to reveal themes that answer the research questions. While data were gathered from only one source, the juxtaposition of open and closed items enabled some internal comparison of findings.

Participants

Demographic information about participants is presented in table one. The gender

identity of participants contained a larger discrepancy than at the university at-large (51%

female; 49% male) but was generally representative of education courses. The racial identity of

participants paralleled the racial composition of the larger student body at W&L as a

predominately White institution. All participants were US citizens.

Table 1

Participants Demographics

Measure	Items	Frequency	Percentage
Gender	Female	28	80%
	Male	7	20%
Race	White	30	85.71%
	Black/African American	2	5.71%
	Mexican/Mexican American	1	2.86%
	Asian, Asian American, or Pacific Islander	1	2.86%
	Hispanic, Latin, or Latin American	1	2.86%
Class	Senior	14	41.81%
	Junior	8	25.53%
	Sophomore	10	29.41%
	Freshman	2	5.88%

In addition to these demographics, respondents reported their majors and minors.

Students at W&L may pursue more than one major or minor at a time, but not more than three

total designations. Education and Education Policy are two distinct minors. Students may choose

to minor in Education with or without teacher licensure. Student majors represented in this study

were Economics (n=6), Psychology (n=5), Politics (n=4), Accounting/Business (n=3), History

(n=3), Philosophy (n=2), English (n=2), and Music (n=2). The following majors accounted for

one respondent: Chinese, Religion, Biology, Sociology, Art History, Environmental Science,

Math, Classics, French, and Spanish. Also, one student was undecided, and one respondent did

not provide a major.

The minors represented in this study were Education (n=11), Poverty and Human

Capability Studies (n = 10), Education Policy (n=9), and Middle Eastern Studies (n=2). Each of

the following minors accounted for one respondent: Africana Studies, Creative Writing, Women

Gender and Sexuality Studies, Mass Communications, and Latin and Caribbean Studies.

Students cannot formally declare Education and Education Policy minors at the same time.

Seven respondents did not provide a minor. All students reported a GPA in the range of 3.0 to

4.0.

Findings

Data suggest college students at W&L hold mixed perceptions of the teaching profession,

and their decisions to study education were impacted either positively or negatively by factors

under the themes of personal desires, institutional structures, and professional structures. The

follow subsections detail the findings to evidence these themes. Results of select closed-response

items from the questionnaire are presented in table two.

Table 2

Results of Select Closed-Response Questionnaire Items

Item	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
Most people believe teaching is a prestigious profession.	4 (12.90%)	19 (61.29%)	6 (19.35%)	2 (6.45%)	0 (0.00%)
Most people believe teaching is an honorable profession.	1 (3.23%)	3 (9.68%)	0 (0.00%)	19 (61.29%)	8 (25.82%)
A liberal arts degree at a school like W&L is compatible with the teaching profession.	0 (0.00%)	2 (6.45%)	3 (9.68%)	7 (22.58%)	19 (61.29%)
My family would support my decision to become a teacher.	2 (6.45%)	5 (16.13%)	2 (6.45%)	9 (29.03%)	13 (41.94%)
My peers would support my decision to become a teacher.	1 (3.23%)	5 (16.13%)	5 (16.13%)	12 (38.71%)	8 (25.82%)
Teaching is an appropriate career path for a W&L student.	0 (0.00%)	4 (12.09%)	9 (29.03%)	3 (9.68%)	15 (48.39%)
The cost of tuition at W&L is a deterrence for students to pursuing careers in teaching.	2 (6.45%)	1 (3.23%)	4 (12.09%)	9 (29.03%)	15 (48.39%)
The visibility of teacher education at W&L is comparable to other programs' visibility.	11 (35.48%)	15 (48.39%)	2 (6.45%)	3 (9.68%)	0 (0.00%)

Perceptions of the Teaching Profession

Participants, both those studying education and those choosing not to study education, largely perceived the teaching profession as honorable but lacking in prestige. When faced with the statement "Most people believe teaching is an honorable profession," twenty-seven participants agreed with the statement either strongly or somewhat (87.1%) and four participants disagreed (12.91%). However, students responded negatively when presented with the statement

"Most people believe teaching is a prestigious profession." Twenty-three participants disagreed (74.19%) with the statement. Another 19.35% (n=6) viewed the statement as neutral and only two participants (6.45%) somewhat agreed with the statement.

Participants overwhelmingly viewed low salaries as the biggest disadvantage to becoming a teacher, with 90.32% (n=28) referencing it. One participant elaborated in a written response, "The problem (is) with the cap on salary increases being at what some would say is relatively low in comparison to the work and education level expected to be attained." Similarly, another participant wrote, "The pay is definitely one of the biggest disadvantages, especially considering the type of work a teacher does and how many hours they work, in and out of the classroom." These perceptions of low pay impacted students' decisions to study education. For example, one student said, "I need to have a career where I can make a real financial return on the cost of my educational investment." Considering perceptions of pay and prestige, it is noteworthy that only 12.9% (n=4) of respondents believed teaching is not an appropriate career for a W&L student and 29.03% (n=12) were neutral toward that statement.

In addition to the perceptions of low prestige and low pay, respondents' open-ended items revealed that teaching was viewed negatively in terms of workload, emotional burden, low autonomy, and limited upward mobility. They used phrases like "an underappreciated field" and "negative stigma" to describe their perceptions of the teaching profession. One student wrote that a big disadvantage to becoming a teacher was due to "the lack of respect afforded to teachers by US society."

Conversely, participants perceived the advantages of becoming a teacher as rooted in relationships and the social impact of the profession, flexible work schedules, transferable skills, and job security. Phrases such as "build communities," "disrupt inequality," and "being a

difference maker" were present in participants' written responses. Describing the advantages of becoming a teacher, one participant stated, "I personally love being in the classrooms and being able to impact the lives of students. I like the idea of being a role model and someone who students can ask advice from." Similarly, another participant wrote, "I believe teachers have an important role in shaping the trajectory of a child's life and therefore influencing the development of the community."

Divergences in Choosing to Pursue a Teaching License

Several conflicting factors emerged that impacted students' decisions to study education. These conflicts are organized under the themes of Personal Desires, Institutional Structures, and Professional Structures. Each theme presents both positive and negative evaluations about studying education as an undergraduate at W&L. These themes highlight the differences in students' perspectives on life, college, and the profession. We note the divergence in perceptions among those students choosing to pursue careers in education and those who are not.

Personal Desires

The theme of students' personal desires centered around the ways respondents represented varying scholarly interests and career or life ambitions. Personal desires played a role for both students choosing to study or not study education as an undergraduate. Among the students who were pursuing an undergraduate pathway toward teacher licensure, they often indicated an intrinsic motivation to become teachers and do meaningful work in their future lives. These views were accompanied with an overall positive view of the profession, including the challenges it faces. Multiple respondents mentioned their desires to work with children and to have impacts in their communities or society at-large as mentioned in the above section.

Conversely, personal desires played a role for some students choosing not to pursue a teaching license. This most frequently included a desire to study another field more than education. Some respondents mentioned their interest in educational policy, but not the specific work of teaching. One student said, "I find teaching and the history and policies behind it interesting but have never had the desire to teach." For another student not pursuing licensure, studying education was still viewed positively as it complemented their major field of study. This student said, "I chose not to pursue teacher licensure because I have a deeper interest in the field of psychology, but the education department gave me a deeper understanding of child psychology by teaching me about the broader context of a child's environment."

Institutional Structures

Findings suggested the appeal of pursuing a K-12 teaching license as an undergraduate was connected to college and programmatic structures. In open-ended survey responses, students shared thoughts about the difficulty of meeting the requirements for licensure, including the time commitment for fieldwork and student teaching, in relation to their other major/minor requirements, general education requirements, and opportunities at the university. For example, one student wrote that an unappealing aspect of studying education was that "one often loses an entire semester their senior year [to student teaching]." Another student suggested their major course of study was demanding, so it was easier to "just pursue an alternative pathway to teaching" than to pursue a professional license while an undergraduate. Similarly, another student said they did not pursue licensure as an undergraduate because "I knew I'd be getting my license through Teach for America."

Yet, some institutional structures, like time commitments, were assessed differently by those choosing to study education. For example, some students responded that pursuing a

teaching license as an undergraduate was more accessible and affordable than other options. For example, one student wrote that it was "far less expensive and much more convenient to do it now rather than later." Another student said it was "the easiest and fastest way to meet my goal [of becoming a teacher]." It should be noted that some students were on full scholarships, while others were not.

Institutional structures arose in the way students thought about the quality and usefulness of the undergraduate teacher preparation program. For example, two students voiced the perception that education courses were less rigorous than other courses which made them less attractive. One student wrote, "I saw teaching as something I could learn and study later in my life, as opposed to some things that I can only learn while I'm here."

However, students who were pursuing licensure placed higher value in their education courses and fieldwork requirements. Many of the teacher-bound respondents referred to the high-quality preparation and valuable experiences provided by studies in education and fieldwork in local schools. They suggested that the education program provided engaging, worthwhile community-based mentoring experiences. One student said they chose to pursue a teaching license because "I want to enter the career as prepared as possible." Another student wrote, "I want to teach elementary school, so it is important to me that I get the proper preparation and qualification to do my job well." Another student said, "I chose to pursue licensure due to the attractive price and the immense helpfulness of the faculty in observing me and guiding me through this process."

Professional Structures

As indicated above, a large majority of respondents (n=28) viewed teaching as a low-paying career; however, this was only referenced by three students in open-ended responses as a factor in their decision to not pursue teaching as a career. While underemphasized in open-ended responses, it is noteworthy that low pay acts as a barrier for some liberal arts students. As one student said:

> …When your parents sacrifice so much to pay for your education, I would hope that they would not have to support me after I graduate and that eventually I could even begin to pay them back and support them in ways that a teaching salary simply wouldn't allow.

The other structural barrier present in multiple responses of students choosing not to pursue licensure was the presence of alternative pathways into the profession. Seven respondents choosing not to study education stated this was due to their plan to join Teach for America, their desires to teach in private school settings that do not require a state teaching license, or their desires to delay studies in education until after graduation due to alternative ways to enter the profession. Several of these responses intersected with institutional structures surrounding students' abilities to complete the licensure pathway in conjunction with the requirements of other majors and minors. It is noteworthy that only one respondent mentioned a professional structure as an affirmative reason to study education as an undergraduate. It was the ability to add-on endorsements through Praxis testing in Virginia.

Discussion and Implications

With several liberal arts universities ending their teaching education programs, findings from this study hold potential to inform liberal arts universities, or other institutions of similar size and context, how they might create a program that successfully recruits and retains high

quality teacher candidates. This study illuminates several aspects within control of the university

or teacher education program to foster these desired outcomes. These aspects include bolstering

efforts to alter students' perceptions about the prestige of careers in education, highlighting the

rigor and usefulness of studies in education, and leaning into students' desires for societal

impact. This discussion includes aspects of W&L's program which have been altered in the wake

of this study.

Respondents viewed teaching careers as lacking in prestige and pay. This data point

echoes prior research on high-achieving students' views of teaching careers (Ingersol &

Mitchell, 2011), though our findings suggest this was not synonymous with students' considering

teaching an inappropriate career choice as prior research suggests (Mancenido, 2021). Many of

W&L's graduates enter high paying positions or post-secondary studies in law, medicine, and

business; therefore, we are aware that altering students' perceptions of prestige in educational

careers can make them more appealing to students. Simultaneously, we recognize the university

possesses structures and resources to support some opportune and prestigious activities.

Therefore, to change narratives and perceptions about careers in education, our teacher education

program has increased opportunities for students to interact with leaders in education. This

includes bringing to campus award-winning teachers and administrators, innovative leaders of

educational non-profits, and leading authors that contribute to intellectual thinking about US

schools. Also, we work with our international education office to support students applying for

Fulbright teaching awards and support students seeking non-traditional routes to teaching or

other creative partnerships with schools and school-systems. Lastly, we integrate policy analysis

and advocacy around issues of teacher pay and working conditions to foster student

empowerment and their desires for leadership and societal impact.

While teacher pay arose as a negative factor influencing many students' decisions, the impact of the price of tuition at W&L remains an unclear factor. Nearly three-quarters of respondents agreed that the cost of tuition was a deterrent to becoming a teacher, but no student referenced tuition as preventing them from studying to become a teacher in open-ended responses. In fact, some students alluded to the cost efficiency, low price, and convenience of getting a teaching degree while an undergraduate. These contradictory findings produced unclear results about the role of tuition on enrollment in the teacher preparation program, but it appears grants or scholarships may produce a positive orientation toward pursuing a teaching license for those interested in it. This finding speaks to a broader issue of equity and access in teacher preparation, particularly as most student teaching internships are unpaid (Erwin, 2022).

Another complex finding from our study was the different views respondents held about the rigor and usefulness of studies in education. This finding is pertinent as teacher education is often marginalized on liberal arts campuses and alternative pathways raise questions about the value of collegiate teacher preparation (Yacek & Kimball, 2017). We recognize that high-achieving students have high expectations for their college courses and a desire for productive intellectual endeavors. We believe teacher preparation is a field that inherently sets high expectations for students, but we speculate that the practical aspects of the work are outside the standard experiences for liberal arts students and, therefore, seen as less than academic in nature.

To join both the rigorous practical elements of teacher preparation and the intellectual expectations of the liberal arts curriculum, we integrate policy analysis throughout the licensure pathway of our program to ensure that studies in education at W&L are equivalent to other social science classes in politics, sociology, or economics. For example, our Foundations of Education course now satisfies a social science credit for the university's general education curriculum.

This social science approach not only attracts academic-oriented students, but also better prepares future teachers for the political landscape of the profession. We believe, as McLellan and Dewey (1895) wrote, that teachers are not "like a cog in a wheel, expected merely to respond to and transmit external energy" but "must be an intelligent medium of action" (p. 15). In addition to policy analysis, we offer non-licensure courses in global comparisons in education and educating for democracy. Open to all students at the university, these courses raise the awareness that studies in education at W&L are rigorous and complex, and not narrowly focused on teacher training. Also, we offer mentored research projects and independent studies that have led to student authored peer-reviewed publications, conference presentations, and new programs for underserved k-12 students in local schools.

The emphasis on education as a social science has engendered more politically-oriented content in our program, including examinations of race, class, and gender. For example, whereas our courses have long examined issues of diversity and culturally responsive pedagogy, students now also scrutinize the political structures that place hurdles to such curriculum and pedagogy. Relatedly, we applied for and received an internal grant to fund two diversity initiatives in teacher education: One was focused on the incorporation of anti-racism literature circles in our elementary and secondary literacy courses, and the second on inclusion of anti-bias, asset-focused training into our directed-teacher seminar. Students reflect on these topics in relationship to their fieldwork. Many students attend local board of education meetings and some explore outlets for social justice advocacy. Lastly, we participate in W&L's Diversity and Inclusion Visit Experience (DIVE) to meet potential students of color, low-income students, and first-generation college students and inform them of opportunities in education.

Similarly, findings suggest many liberal arts students seek studies in education because of their desire to have an impact on society. We acknowledge that students have many unique definitions of societal impact. We also recognize the ability for our program to build structures to support a variety of students' passions and projects beyond the classroom. This idea of broad societal impact aligns well with the mission of the university to prepare graduates "for lifelong learning, personal achievement, responsible leadership, service to others, and engaged citizenship in a global and diverse society" (Washington and Lee University, 2023, para. 1). We suggest programs should align their work with the broader missions and strategic plans of universities to garner support from administrators.

To do so, we initiated community-based learning that moves beyond the traditional practice of using local schools as only career preparation sites. We embed service projects into our courses and our student-teaching requirements. Additionally, we developed a selective student-led service program that aims to meet the varied needs of local public schools to strengthen our partnerships and work with community leaders to strengthen local high-needs schools (Sigler & Moffa, 2020). These programmatic changes have garnered support from university administrators and created a buzz among students about serving local schools. Furthermore, these opportunities have fostered students' knowledge of a systems-level approach to community change and school partnerships.

Limitations

As a self-study, findings highlight one specific liberal arts context. These results should be transferable to other liberal arts universities with similar contexts; however, results are not generalizable to all teacher education programs and universities. As a study that utilizes both closed and open-ended questionnaire items, some types of quantitative analyses were not

conducted in exchange for emphasizing student voices. Future research might examine the

different perspectives of first-year students versus more advanced students; students that have

taken more education classes versus those with only one introductory class; or comparing

perspectives based on different family income levels. Also, the mostly homogeneous racial and

gender identities of participants did not support a robust comparison of these variables. Future

research could reveal nuances that remain unexamined in the current study.

Conclusion

While the arena of teacher education in the US is varied across many types of collegiate

institutions and alternative programs, we believe teacher educators must work to counter

dwindling enrollments and a de-professionalization of teaching. Our smallest, most marginalized

collegiate programs are likely to feel the crunch of declining enrollments. Simultaneously, small

programs at selective liberal arts institutions may face the dual threat of a tepid existence and

institutional perceptions from students, administrators, and others that teaching is an

inappropriate career for high-achieving students. Knowledge from this study can be used to

counter negativity toward teaching careers, bolster positive motivations, and produce

opportunities that align with students' personal desires as well as the mission and resources of

liberal arts institutions. Doing so can produce licensure programs that thrive during these

challenging times in teacher education.

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Appendix A

Research Questionnaire

1. Class Year:

2. Major:

3. Minor:

4. Gender:

5. Race:
   - American Indian or Alaska Native
   - Asian, Asian American, or Pacific Islander
   - Black or African American
   - Mexican or Mexican American
   - Puerto Rican
   - Other Hispanic, Latino, or Latin American
   - White

6. Home State:

7. GPA:

8. Estimated Yearly Family Income:
   - $0 - $20,000
   - $20,000–$40,000
   - $40,000–$60,000
   - $60,000–$80,000
   - $80,000–$100,000
   - $100,000–$120,000
   - $120,000–$140,000
   - $140,000–$160,000
   - $160,000–$200,000
   - More than $200,000

9. Do you receive tuition assistance to meet financial need? Check all that apply.
   - W&L meets 100% of my financial need
   - I receive partial financial aid
   - My family pays full tuition
   - I am a Johnson Scholar
   - I am a Questbridge Scholar

10. How many Education courses have you taken?

11. What are your interests in studying education at W&L? Check all that apply

- I plan to pursue the teacher licensure program at W&L
- I plan to be a teacher.
- I am interested in education policy.
- I plan to pursue alternative certification (TFA, Urban Teachers, etc.)
- It met an FDR (General Education Requirement)
- It met another program requirement.
- Other _____

12. What do you see as advantages of becoming a teacher?

13. What do you see as disadvantages of becoming a teacher?

14. What are the main reasons you chose to pursue or not pursue teacher licensure at W&L?

15. Do you agree/disagree with the following statements (Likert Scale Responses):
   - Society believes teaching is a prestigious profession.
   - Society believes teaching is an honorable profession.
   - A liberal arts degree at a school like W&L is compatible with the teaching profession.
   - My family would support my decision to become a teacher.
   - My peers would support my decision to become a teacher.
   - Teaching is an appropriate career path for a W&L student.
   - The cost of tuition at W&L is a deterrence for students to pursue teaching as a profession at W&L.

16. Do other people's perceptions of teaching influence your decision to study or not study education?

17. How do your friends perceive your choice to study education?

18. How do your parents or other family members perceive your choice to study education?

19. How do you perceive the visibility and status of teacher education at W&L compared to other programs?

Teacher Candidates' Culturally Responsive Teaching Self-Efficacy and Attributional Development: A Multi-Methods Study

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Abstract

The need for educators to utilize culturally responsive pedagogy to support culturally and linguistically diverse (CLD) student populations is critical. This research examines the formation of teacher candidates' culturally responsive teaching self-efficacy (CRTSE) and attributional beliefs for teaching CLD learners. Findings inform existing research on teachers' CRTSE beliefs and attributional development as we identify areas for improving educator preparation programs (EPP) and discuss recommendations for transformative institutional change aligned with the Association of Teacher Educators (ATE) teaching standards, which support the need for EPPs to develop teacher candidates' capacity to create inclusive learning opportunities for culturally, socially, and linguistically diverse students. This research also contributes to this professional literature by examining the formation of teacher candidates' CRTSE and attributional beliefs for teaching CLD learners and identifies areas of improvement regarding social justice principles and the application of cultural competence in EPP coursework and practicum experiences.

Keywords: self-efficacy, attribution theory, culturally responsive/culturally relevant teaching

The need for educators to utilize culturally relevant/responsive pedagogies (CRPs) to

teach and support diverse student populations is well documented in seminal literature (Banks &

Banks, 2019; Gay, 2010; Ladson-Billings, 2009). This call to action is also reflected in teaching

standards, like the Association of Teacher Educators' (ATE) Standards for Teacher Educators,

which delineate the importance of the application of "cultural competence and [promotion] of social justice" (ATE, 2008, p. 4). Likewise, many education colleges include the importance of preparing educational professionals to work with and support diverse student populations in their mission and vision statements.

The stagnant demographics of a majority White teaching force in relation to an increasingly diverse K–12 student population in the United States makes this call to action more critical. Education in the United States, including teacher education, has been constructed on White Eurocentric norms for a predominantly White teaching field, and thus, by design, diverse student populations are denied equal access (Matias & Aldern, 2019). Theoretical approaches to educational pedagogy and practice like CRP seek to intentionally address the "educational debt" that diverse student populations have been burdened with because of inequitable education practices based on assimilationist and deficit mindsets about culturally and linguistically diverse (CLD) student populations (Ladson-Billings, 2006).

Deficit perspectives lead teachers to approach cultural and linguistic differences as something to be fixed, and thus, they begin to insist that all students learn to conform to traditional Eurocentric standards in education (Gay, 2014). CRP is a "pedagogy that empowers students intellectually, socially, emotionally, and politically by using cultural references to impart knowledge, skills, and attitudes" (Ladson-Billings, 2021, p. 4). CRP is not an exhaustive checklist of strategies but a dispositional approach to pedagogy and teaching that must be consistently developed.

Ladson-Billings (2017) detailed the importance of "leverage points" (admissions, prior to student teaching, certification) in educator preparation programs (EPPs) to ensure that teacher candidates (TCs) are developing the necessary knowledge, skills, and dispositions and thus are

prepared to work with diverse populations of students. However, Siwatu (2011) emphasized that "assisting prospective teachers [to] develop the knowledge and skills associated with culturally responsive teaching may not [alone] accurately predict their future classroom behavior" (p. 360). Weiner's attributional theory (1985) can also provide insight into how TCs attribute their successes and failures in teaching CLD learners to internal factors (e.g., knowledge, teaching skills) or external factors (e.g., students' backgrounds, language barriers). Analyzing attributions can reveal whether TCs hold optimistic (persistence and effort) or pessimistic (discouragement and avoidance) beliefs about their ability to teach CLD learners. Thus, this research focuses on executing said knowledge and skills and examines the formation of TCs' culturally responsive teaching self-efficacy (CRTSE) and attributional beliefs for teaching CLD learners. Findings inform existing research on teachers' CRTSE beliefs and attributional development as we identify areas for improving EPPs and discuss recommendations for transformative institutional change.

Theoretical Framework

It is common to see words like "social justice," "diversity," and "CRP" included in the mission statements of EPPs. Sleeter (2017) suggested that although many EPPs claim to center diversity and equity, they lack the curriculum, pedagogy, and practical experience to develop race-conscious educators. Studies indicate that many EPPs rely on stand-alone courses and or diverse field experiences to prepare their TCs to meet the needs of diverse students and/or satisfy accreditation mandates (Ladson-Billings, 2000). Chaplin (2019) stated that "the abundance of curricular materials that emphasize acceptance and tolerance while deemphasizing critical analysis is problem posing and just one example of how the transformative power of multicultural education can be muted by the dominant narrative for tolerance" (p. 151).

Ladson-Billings (1995) defined culturally relevant pedagogy as "a theoretical model that not only addresses student achievement but also helps students to accept and affirm their cultural identity while developing critical perspectives that challenge inequities that schools (and other institutions) perpetuate" (p. 469). Thus, to develop as culturally relevant practitioners, TCs must have the opportunity to engage in the following continuous process in their EPPs: (1) acquisition of a knowledge base, (2) participation in transformative dialogue about educational practices, and (3) participation in self-analysis (Ladson-Billings, 1995). Thus, development as a culturally relevant practitioner requires an ongoing commitment and engagement in this process of seeking out opportunities to develop knowledge, engage in transformational practices, self-reflect, and then repeat the process; this engagement must be taught and facilitated in EPPs for TCs to engage in it on their own throughout their careers. To gain insight into how TCs view and ascribe their abilities, successes, and failures as developing culturally relevant practitioners, we examined the literature on CRTSE and attributional theory.

Culturally Responsive Teaching Self-Efficacy

CRTSE, extrapolated from Bandura's (1977) seminal research on self-efficacy (SE), is rooted in social cognitive theory. Bandura identified that cognitive factors affect behavior regulation and that SE and outcome expectations (Bandura, 1977, 1986) form expectancy behaviors. Bandura (1977, 1986, 1997) posited that effective functioning is based on more than knowledge and skill (which are inadequate predictors of future behavior). He asserted that the belief in one's ability to execute the action required to achieve the optimal result—or a sense of SE—is required to access and utilize the needed skills. Bandura put forth four sources that informed efficacy beliefs: mastery experience, vicarious experience, verbal persuasion, and

emotional/psychological state. These same four sources form the expectancy behaviors of CRTSE.

When a TC's perception of their confidence to execute specific teaching practices is also supported by teachers who have demonstrated expertise in CRP, they can develop high CRTSE (Siwatu, 2007, 2011). When inculcating CRTSE, as in Bandura's (1977) efficacy study, mastery (or performance) experience is the most influential element, followed by vicarious or observational experience through watching a teacher or mentor successfully utilize the pedagogy. CRP is a process of doing; thus, engaging TCs in culturally responsive teaching practices during their EPP is paramount in building TC (SE). When a TC observes CRP (Knoblauch & Chase, 2015) and discerns which responses are appropriate in which settings (Dulany, 1968), there is an increase in their perception of their abilities.

Providing TCs with practicum and field experiences that mirror today's classrooms can impact their attitudes and beliefs (Groulx, 2001), especially when they are supported and mentored by those who provide course curricula and artifacts (Siwatu, 2007) representative of a multicultural environment. Kalchman (2015) maintained that vicarious modeling of CRP for TCs increased confidence in instructing CLD learners. Verbal persuasion in the form of positive feedback from teacher education faculty, cooperating teachers, and practicum supervisors may increase TCs' sense of CRTSE (Bandura, 1977; Siwatu, 2007). High-SE individuals are more likely to be more persistent and open themselves up to new learning opportunities and situations when facing a challenging problem (Bandura, 1993, 1997), which is vital to acknowledge as CRTSE considers TCs' prior interactions with diverse populations and engagement in the continuous process of development as a culturally responsive educator (Siwatu, 2007).

Attribution Theory

In trying to determine the success or failure of something, people turn to themselves and their surroundings for explanations (Forsyth, 1980; Weiner, 1985, 2000, 2010). Weiner (1985) posited there are myriad causal explanations within any activity. The results of actions depend on intrapersonal and environmental factors (Collins et al., 1974; Heider, 1958; Rotter, 1966) that are both constant and fluid (Weiner, 2010) and are affected by controllability (Rosenbaum, 1972; Weiner, 2000, 2010). The perceived causes of a person's success or failure share three common properties: locus, stability, and controllability, with intentionality (the contrast between effort and strategy) and globality as other possible causal structures (Weiner, 1985). According to Weiner (1985, 2000, 2010), preservice teachers' causal attributions about their cultural awareness can predict their knowledge and praxis for teaching CLD learners.

To gain insight into TCs' perception of their abilities, SE, and attributional beliefs, this article's researchers constructed this study utilizing Bandura's (1977) SE framework in conjunction with attributional theory (Weiner, 1985, 2000, 2010) and Siwatu's (2007) culturally responsive teaching competencies. Researchers have posited that exploring SE and attribution theory concerning abilities as a culturally responsive educator gives a more cohesive representation of the experiences and perceptions of TCs and can provide recommendations to inform the transformation of CRTSE in educator preparation programs. The research questions framing the study and data analysis were:

RQ1. How confident are TCs in their ability to implement culturally responsive pedagogies?

RQ2. How do TCs perceive their CRTSE and attributional beliefs for CLD learners?

Method

The researchers used an explanatory multi-methods design. During Phase I, quantitative data were collected to examine the nature of TCs' CRTSE. Follow-up interviews were conducted during Phase II to collect qualitative data from a subsample of five volunteers selected from Phase I TCs to identify their CRTSE-forming experiences and the perceived influence these experiences had on the development of their CRTSE and attributional beliefs for teaching CLD learners. Purposeful sampling was used to engage the Phase II TCs in semi-structured interviews to determine how TCs believed their EPP influenced their CRTSE and attributional beliefs related to working with CLD learners (RQ2).

Context

The data for this study were elicited from TCs enrolled in a university-based, clinically intensive, competency-based EPP in the southwestern United States. In addition to pursuing a generalist early childhood–sixth grade certification, TCs were also enrolled in a Special Populations course sequence, which include six required courses focused on competency-based standards for supplemental certifications in English as a second language, special education, and bilingual education. TCs enrolled in the EPP must complete (1) the required content area methods courses (mathematics, literacy, social studies, and science), (2) a Special Populations course (SPC) sequence (18 credit hours), (3) a year-long clinical teaching residency, and (4) required state content pedagogical and specialty certification exams.

Participants

The sample consisted of 70 senior-level TCs majoring in elementary ($n = 65$), middle-level ($n = 4$), and secondary ($n = 1$) education. Phase I TCs ($n = 70$) included 66 females and four males. TCs' race/ethnicity included: 57% indicated they were non-White (e.g., Mexican,

Asian, or African American), and 43% stated they were White. Phase II included Phase I

volunteers ($n = 5$).

Phase I Data Sources and Data Collection

During Phase I, we administered the CRTSE scale. The CRTSE scale aims to elicit

information regarding teachers' efficacy in executing specific teaching practices and tasks

associated with teachers who have adopted a CRP (Siwatu, 2007). The CRTSE scale was created

based on an in-depth literature review and later validated through a pilot study (Siwatu, 2007).

The scale consisted of 40 Likert-type items that required TCs to rate their confidence in their

ability to engage in specific CRT practices. To determine how confident TCs are in their ability

to implement CRPs (RQ1), TCs' responses to each of the 40 items were summed to generate a

total score. TCs with higher scores on the CRTSE scale were more self-confident than those with

lower scores who were less self-confident in working with diverse learners. The CRTSE scale

was administered in March 2022 during the final semester of the TCs' EPP and the second

semester of their year-long clinical placement.

Phase II Data Sources and Data Collection

Purposeful sampling was used to engage five volunteer TCs from Phase I using semi-

structured interview questions (Appendix A) to determine how TCs believed their EPP

influenced their CRTSE and attributional beliefs related to working with CLD learners (RQ2).

Qualitative researchers intentionally sought individuals who could best speak to the research

problem being investigated and, because they interacted with TCs while collecting data, the

sample size was small (Creswell & Creswell, 2018) to provide opportunities to collect

information-rich and relevant data (Patton, 2015, p. 169). The Phase II TCs were valuable in

helping answer RQ2 because they were currently enrolled in an EPP that emphasized CRPs in coursework and clinical experiences.

We utilized grounded theory analysis (Glazer & Strauss, 1967) to analyze the data through inductive, iterative coding that allowed for pattern matching and inculcation of themes. We each compared codes to establish intercoder reliability. Table 1 provides the Phase II TC demographics. Semi-structured interviews were conducted in May 2022 during the final semester of the TCs' EPP and at the end of their year-long clinical placement.

Table 1

Phase II TC Demographics

Participant Pseudonyms	Gender	Ethnicity	Age	School Setting	Grade Level
Ana	Female	Hispanic	18–25	Urban Elementary K–5 Campus	2nd
Bora	Female	Asian	18–25	Urban Elementary K–5 Campus	4th
John	Male	White/non-Hispanic	18–25	Urban Middle School Campus	7th
Beth	Female	White/non-Hispanic	18–25	Urban Elementary PK–3 Campus	K
Marta	Female	Hispanic	26–30	Urban Elementary K–5 Campus	2nd

Results

Descriptive analysis was used to identify patterns, relationships, and trends of the Phase I data to determine how confident TCs are in implementing culturally responsive pedagogies (RQ1). Thematic analysis was used to identify and interpret data patterns and themes of Phase II data to determine how TCs perceive their CRTSE and attributional beliefs for CLD learners (RQ2).

Phase I Descriptive Analysis

TCs' CRTSE means were high in their ability to build relationships with their students: "build a sense of trust in my students" ($M = 95.01$, $SD = 8.54$), "help students feel like important members of the classroom" ($M = 94.64$, $SD = 9.05$), and "develop a personal relationship with my students" ($M = 93.15$, $SD = 12.70$). TCs' CRTSE scale results were also high in items related to their ability to learn about students' interests: "determine whether my students like to work alone or in a group" ($M = 91.11$, $SD = 11.93$), "obtain information regarding my students' academic interests" ($M = 91.75$, $SD = 12.84$) , "use the interests of my students to make learning meaningful for them" ($M = 91.89$, $SD = 12.91$), "implement cooperative learning activities for those students who like to work in groups" ($M = 92.79$, $SD = 16.58$) "use the learning preference inventory to gather data about how my students like to learn" ($M = 90.06$, $SD = 14.73$), and "determine whether my students feel comfortable competing with other students" ($M = 97.78$, $SD = 14.63$). Items related to curriculum design and assessment for CLD learners had means of 89 or lower: "identify ways that standardized tests may be biased towards linguistically diverse students" ($M = 88.43$, $SD = 13.89$), "critically examine the curriculum to determine whether it reinforces negative cultural stereotypes" ($M = 88.42$, $SD = 15.03$), and "design a lesson that shows how other cultural groups have made use of mathematics" ($M = 89.00$, $SD =$

14.44). Furthermore, items related to parent communication also had means of 89 or lower:

"communicate with parents regarding their child's educational progress" (M = 88.94, SD =

16.74) and "structure parent–teacher conferences so that the meeting is not intimidating" (M =

89.60, SD = 16.06). Item-specific means were lowest among the critical components, including

"use strategies to minimize the effects of the mismatch between home culture and school

culture" (M = 85.81, SD = 16.67), "adapt instruction to meet the needs of my students" (M =

87.18, SD = 14.76), and "revise instructional material to include a better representation of

cultural groups" (M = 87.72, SD = 19.01). TCs in this study had a mean score of 3585.01 (SD =

475.93). High scores on the CRTSE scale indicate a greater efficacy for engaging in specific

instructional and noninstructional tasks associated with culturally responsive teaching. The

scores for TCs in this study ranged from 1365 to 4000. Table 2 includes the means and standard

deviations for the CRTSE scale.

Table 2

Means and Standard Deviations for Items on the CRTSE Scale

Items	*M*	SD
(1) Adapt instruction to meet the needs of my students	87.18	14.76
(2) Obtain information about my students' academic strengths	87.42	14.65
(3) Determine whether my students like to work alone or in a group	91.11	11.93
(4) Determine whether my students feel comfortable competing with other students	97.78	14.63
(5) Identify ways that the school culture (e.g., values, norms, and practices) is different from my students' home culture	88.11	14.26
(6) Implement strategies to minimize the effects of the mismatch between my students' home culture and the school culture	85.81	16.67
(7) Assess student learning using various types of assessments	91.21	17.32
(8) Obtain information about my students' home life	87.57	16.93
(9) Build a sense of trust in my students	95.01	8.54

(10) Establish positive home–school relations	90.03	13.29
(11) Use a variety of teaching methods	90.69	12.53
(12) Develop a community of learners when my class consists of students from diverse backgrounds	90.60	13.58
(13) Use my students' cultural backgrounds to help make learning meaningful	89.67	13.16
(14) Use my students' prior knowledge to help them make sense of new information	89.75	14.97
(15) Identify ways how students communicate at home may differ from the school norms	97.76	14.86
(16) Obtain information about my students' cultural background	93.18	21.06
(17) Teach students about their cultures' contributions to science	92.36	21.65
(18) Greet English language learners with a phrase in their native language	88.19	16.35
(19) Design a classroom environment using displays that reflect a variety of cultures	89.85	15.03
(20) Develop a personal relationship with my students	93.15	12.70
(21) Obtain information about my students' academic weaknesses	90.29	13.32
(22) Praise English language learners for their accomplishments using a phrase in their native language	90.96	11.66
(23) Identify ways that standardized tests may be biased towards linguistically diverse students	88.43	13.89
(24) Communicate with parents regarding their child's educational progress	88.94	16.79
(25) Structure parent–teacher conferences so that the meeting is not intimidating for parents	89.60	16.06
(26) Help students to develop positive relationships with their classmates	91.50	14.19
(27) Revise instructional material to include a better representation of cultural groups	87.72	19.01
(28) Critically examine the curriculum to determine whether it reinforces negative cultural stereotypes	88.42	15.03
(29) Design a lesson that shows how other cultural groups have made use of mathematics	89.99	14.44
(30) Model classroom tasks to enhance English language learners' understanding	91.60	13.95
(31) Communicate with the parents of English language learners regarding their child's achievement	90.36	15.09
(32) Help students feel like important members of the classroom	94.64	9.05
(33) Identify ways that standardized tests may be biased towards culturally diverse students	90.00	13.43

(34) Use a learning preference inventory to gather data about how my students like to learn	90.06	14.73
(35) Use examples that are familiar to students from diverse cultural backgrounds	88.93	14.62
(36) Explain new concepts using examples that are taken from my students' everyday lives	90.61	13.45
(37) Obtain information regarding my students' academic interests	91.75	12.84
(38) Use the interests of my students to make learning meaningful for them	91.89	12.91
(39) Implement cooperative learning activities for those students who like to work in groups	92.79	16.58
(40) Design instruction that matches my students' developmental needs	92.32	16.95

Phase II Thematic Analysis

Using the methodology described by Lincoln and Guba (1985), semi-structured interviews were transcribed and shared with Phase II TCs to cross-check their responses and corroborate data accuracy. Data from both sources were organized to present the data systematically to answer the research questions. Data analysis relied on analysis of the data across the interviews. Researchers developed a list of codes arising from the RQ2, realizing that new codes may emerge in the analysis. Through coding, researchers looked through the data collected and identified words or phrases that gave information about the questions asked around TCs' CRTSE and attributional beliefs for CLD learners. Codes were sorted into group orders to find common themes, and hand-coding was then used to organize the data. Semi-structured interview data revealed three emergent themes identifying how TCs perceived their EPP, CRTSE, and attributional beliefs for teaching CLD learners.

Theme 1

The EPP provided limited opportunities to plan instruction and teach CLD learners during content methods courses. When asked to share their successes or challenges in teaching CLD learners, TCs identified inadequate resources and a misalignment between course teaching

expectations and students' individualized learning needs in clinical placement as barriers to their teaching success.

John stated that limited resources and support in his clinical placement inhibited his opportunities to plan instruction for CLD learners:

> The problem is that my campus did not have resources - very limited special education teachers. I think I only met with our math person three times all year - that is not how it is supposed to be based on what we learned in our courses.

Ana attributed a disconnect between the EPP methods course expectations and the learning needs of CLD learners in her clinical placement as a barrier to her teaching self-efficacy:

> I think the way we learn to teach reading and math is good, but it does not always align with what happens in our placement. We had to do the lesson exactly as the instructor wanted instead of how our diverse learners needed.

Beth attributed limited opportunities to plan instruction using CRP during her EPP methods coursework as a barrier to her ability to teach CLD learners in her clinical placement:

> The core subjects - math, science, reading, and social studies - need to include more strategies for students that have learning and language needs. I think having opportunities to write and teach lessons specifically for English learners and students with a disability would be helpful.

Theme 2

TCs were confident in applying the specialized pedagogy they learned during their SPC. TCs attributed opportunities to apply CRPs they learned in the SPC during their clinical placements to their perceived success in building relationships with their students. When asked which EPP courses helped prepare her to teach CLD learners, Ana identified specialized

pedagogy and strategies from the SPC for building student relationships as contributing to her

teaching confidence:

> I got to know them first. I built a relationship with them so that they would work with me.
>
> They were all great, though it took time. I spent the beginning few weeks getting to know
>
> what they liked, what worried them, what their goals were, and what motivated them.

John also attributed the knowledge and skills he acquired during the SPC to increasing his

confidence in applying specialized pedagogy to help a CLD learner in mathematics:

> One of my struggling students passed an exam with an 82! He had been coming to my
>
> tutorials and really made progress. I was able to watch him work problems from start to
>
> finish and pinpoint the mistakes. Just being able to teach him strategies was great, and
>
> they worked for him.

Beth described how she used the knowledge and skills emphasized during the SPC to implement

specialized pedagogy, strategies, and technology to support CLD learners:

> We used audiobooks, apps, and YouTube to help create activities and support in Spanish.
>
> The kids really liked this, and it helped bring them into the lessons. Our students really
>
> did great once we had the materials we needed to teach them.

Marta shared her confidence-building experiences in supporting CLD learners using specialized

strategies she learned during the SPC:

> I learned how to select the best visuals to support our English learners. I also used visuals
>
> that connected to things the students were interested in like video games and memes. We
>
> used a word wall and journals to give the students resources.

Bora also shared her confidence-building experiences using manipulatives support CLD learners

during mathematics instruction:

I did do lessons with manipulatives a few times and felt like this visual and kinesthetic

support really helped my students. I think getting to teach through the different modalities

is beneficial for everyone. I want to explore using more manipulatives in my math

lessons.

Theme 3

Mentorship for CRTSE should be multileveled. TCs perceived their success in teaching

CLD learners to be significantly positively and negatively impacted by their relationship with

their mentor teacher.

When asked about the support she received to teach CLD learners during her clinical

placement, Ana described positive interactions with her mentor teacher as a contributing factor to

her success in applying CRP during instruction:

I talked to my mentor about my lesson, and she helped me work through what went

wrong and how to check for understanding throughout the lesson instead of waiting until

the end. Simple really, but I didn't know how to do it at the time.

Bora experienced both positive and negative mentorship. "I talked with my mentor. She helped

me understand my behavior so that I could work on observing my students during instruction and

taking my cues from them. This helped." However, Bora later stated:

My mentor was really focused on getting the students ready for STAAR (State of Texas

Assessments of Academic Readiness). This also did not allow me many opportunities to

design lessons or implement strategies that I wanted to try. Instruction was very test-

driven.

John also believed that his success in teaching CLD learners was negatively impacted by limited mentorship, "I talked with my mentor, but she was overwhelmed and told me that I'd get used to not having all of my students succeed."

Discussion

Data collected during Phase I were utilized to answer RQ1: How confident are TCs in their ability to implement culturally responsive pedagogies? Results from Phase I of this study indicated TCs were more efficacious in their perceived ability to build relationships with students (Items 9, 20, and 32). Similarly, TCs felt more efficacious in their ability to determine students' learning needs (Items 3, 4, 34, 37, 38, and 39). These findings could be attributed to TCs' prolonged clinical placement in a school setting and numerous daily opportunities to engage with students. However, CRTSE items that were more critical indicated lower means (Items 28, 29, and 33). An explanation for this finding could be that most TCs are expected to follow the district's mandated curriculum and are not permitted to make changes. Therefore, they may not feel comfortable adjusting or critically analyzing the curriculum.

Additionally, items related to parent conferences also had slightly lower means (Items 23 and 24). While TCs in this study spend an entire academic year in their clinical residency, they are not the teacher of record. Thus, they may not be able to lead a parent–teacher conference. Furthermore, teacher preparation courses in the TCs' EPP do not focus on how to lead parent–teacher conferences or communicate child progress, which would explain the lower means.

Data collected in Phase II were utilized to answer RQ2: How do TCs perceive their culturally responsive teaching self-efficacy and attributional beliefs for CLD learners? Results from Phase II of this study indicate that TCs perceived their lower CRTSE regarding the ability to support CLD learners' home and school cultures and adapt the curriculum to equitably

represent cultural groups to a lack of knowledge and opportunities to practice implementing CRP in the content methods coursework for mathematics, language, and literacy, science, and social studies (Theme 1). However, TCs perceived their success in building trust and relationships with CLD learners and helping them feel like essential classroom members are attributed to the knowledge and dispositions they developed during the SPC (Theme 2). Further, TCs perceive their success in teaching CLD learners as positively and negatively impacted by their relationship with their mentor teacher during their practicum teaching experiences. While TCs reported having positive relationships with mentor teachers in their responses to Q4 on the semi-structured interview, results from the Phase II data indicate limited transformative dialogue and reflection opportunities during clinical experiences (Theme 3).

Findings from this study are consistent with research by Ladson-Billings (2017), which indicates that TCs need opportunities to engage in the process of knowledge acquisition, participation in transformative dialogue regarding educational practice, and self-reflection. Findings from this study were also consistent with Weiner (1985, 2000, 2010), which suggests that TCs' causal attributions about their cultural awareness can predict their knowledge and praxis for teaching CLD learners.

Limitations

A limitation of the study is that Phase II relied on volunteers from Phase I, which could have resulted in a difference in participating TCs' and nonparticipating TCs' answers to the interview questions. Those who chose to participate could have had a negative bias towards CRP, or vice versa, compared to those who decided not to participate, which could have skewed the interview themes, resulting in more positive or more negative attributional beliefs for teaching CLD learners.

Scholarly Significance and Implications

This study contributes to the literature that illustrates how developing TCs' attributions and SE for teaching CLD learners is critical in developing their ability to teach and support diverse student populations effectively, which requires transformative efforts on the part of EPPs. In learning to grow as a culturally responsive educator in their EPPs, TCs will be equipped to sustain and develop their CRTSE throughout their teaching career, allowing them to support future TCs. Fostering positive attributions and SE in this context also contributes to a more inclusive and equitable educational system. As suggested by the results of this study, EPPs must internalize the value of experiential learning for TCs to enter the teaching profession as confident, culturally responsive educators. Reflective action in EPPs with CRP as a priority requires a commitment to social justice and people affected by injustice. Because CRP relies on a dispositional approach to pedagogy, EPPs must be more intentional in designing curricula and programmatic and systemic strategies to prepare TCs to be race-conscious and facilitate the kind of praxis needed to transform education for CLD learners. However, this is a significant undertaking; thus, future studies should focus on this transformation process and suggestions for teacher educators on how to facilitate this.

Following Standard 2 Cultural Competence of the Association of Teacher Educators' teaching standards, it is essential for teacher candidates first to know their own cultures to develop the capacity among culturally, socially, and linguistically diverse students (ATE, 2008). Through curricula and practicum experiences, EPPs must include opportunities for teacher candidates to examine their dispositions. Carrizales et al. (2022) suggest that multispecialty programs that center the needs of diverse student populations, like emergent bilingual students and students with disabilities, are essential in transforming EPPs to become more equitable;

however, this must be paired with critical multicultural education. In addition, teacher candidates must be provided with opportunities to practice selecting an "inclusive curriculum, use a range of assessment methods, and be proficient in a variety of pedagogical strategies that facilitate the acquisition of content knowledge for all learners" (ATE, 2008) during their content area methods coursework. EPPs must ensure that teacher candidates understand the concepts and definitions of cultural competency and can make the course-to-field connection. This call to action presents a unique opportunity for interdisciplinary work from core content areas (mathematics, science, social studies, literacy) and multicultural education. Social justice is not achieved through a singular event. Still, rather than a collection of transformations that build a new system, all facets of EPPs (coursework, curriculum, and field experiences) must be transformed.

Furthermore, EPPs must listen to their students as they communicate their need to align their coursework with their preservice praxis. TCs' insight directly links theory and practice, enabling EPPs to bridge the gap between coursework and the realities they experience during their practicum experiences. Existing literature on transformative efforts in teacher preparation is mainly theoretical; however, studies such as this one provide the insight needed to build a program with the students being served within it in mind; thus, future studies should center the process of transformation grounded in TC feedback. When TCs reflect on their experiences, they offer a practical perspective on what works and what needs improvement, aiding program administrators in refining curriculum and instructional strategies accordingly. By centering the experiences of TCs in transformative efforts, teacher educators invite them to co-construct transformative efforts and thus be a part of the advancement towards social justice. This process is crucial for TCs of color, as their voices and experiences are often rendered invisible in a system constructed on Whiteness (Anderson & Aronson, 2019). Involving TCs in decision-

making gives them a sense of ownership and agency within their education, which not only

enhances their investment in their EPP but also allows them to develop the negotiation skills and

dispositions needed to advocate for their student's needs in the future.

Finally, echoing the findings of both Bandura (1971, 1977, 1993, 1997) and Siwatu

(2007, 2011), mentors on all levels must model CRP and provide contexts (Knoblauch & Chase,

2015) in which TCs can have the opportunity to develop high CRTSE and attributional beliefs

for teaching CLD learners before they enter the field. Mentor teachers set the tone for the school

community, and when they incorporate CRP, they convey a commitment to equity and

inclusivity, which can influence the broader educational culture. They must embody what it is to

be a culturally responsive practitioner and show that it is not just a theory but a practical and

necessary component of effective teaching. Classrooms are increasingly diverse, representing

various cultures, languages, and experiences; thus, to meet these changing needs, mentor

teachers must ensure that TCs are well-equipped to support and empower their students

meaningfully. Through intentional crucial conversations and modeling, mentors can provide

practicum experiences that are inclusive, equitable, and enriching to support TCs' CRTSE

development and attributional SE for today's CLD learners. Mentoring TCs to develop as

culturally responsive practitioners allows the mentor teacher to grow in their capacities and thus

can transform the educational system. Field experiences could conclude with two culturally

responsive educators who can combat deficit mindsets, support CLD students "intellectually,

socially, and politically" (Ladson-Billings, 2021, p. 4), and intentionally work to address the

long-standing "educational debt" (Ladson-Billings, 2006).

Conclusion

The need for educators to utilize CRP to support diverse student populations is critical. Research indicates that culturally competent teachers who use transformative and justice-oriented curricula and pedagogy create learning opportunities that are inclusive and engaging and that welcome diversity. This research contributes to this professional literature by examining the formation of TCs' CRTSE and attributional beliefs for teaching CLD learners and identifies areas of improvement regarding social justice principles and the application of cultural competence in EPP coursework and clinical experiences.

Understanding how TCs' CRTSE and attributional beliefs are formed can further apprise educational policies and practices to shift most Eurocentric teaching practices in K–12 classrooms to practices steeped in cultural competence. The emergent themes in this research suggest that EPPs need to provide direct instruction in CRP and provide TCs opportunities to plan and implement instruction for CLD learners during EPP core content methods coursework and practicum experiences. If EPPs are to move beyond what Sleeter (2017) referred to as a superficial centering of diversity, they must infuse CRP into every facet of the program, particularly core content coursework. If culturally responsive educators are expected to empower students intellectually and academically (Ladson-Billings, 2021), they must have the opportunity to learn core content in a culturally responsive manner. Another significant theme in this research recognizes the impact of mentor teachers on TCs' perceived success with CLD students. Culturally competent teachers understand how their personal biases can impact the learning process for CLD learners. Findings from this research emphasize the need for EPPs and mentor teachers to examine deficit mindsets they may have and transform dispositions towards cultural

and linguistic differences into practices that empower diverse learners' intellectual, social,

emotional, and cultural growth.

Teacher educators, researchers, and policymakers must work together to improve and

advance curricula, pedagogy, and strategies that support CLD learners. EPPs must commit to

grounding every facet of their programs in cultural competence and thus commit to

transformative efforts in teaching methods, course design, clinical experience structures, and

school-university partnerships. Many educators initially enter the field through an EPP and go on

to hold other school and district leadership positions, and thus reorienting them to focus on

cultural responsiveness and not Whiteness, as the system currently does, has the potential to

enact multilevel change and truly make significant strides towards social justice.

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APPENDIX A

Semi-Structured Interview Questions (Phase II)

(Q1) Do you have opportunities to teach culturally and linguistically diverse (CLD) learners during your student teaching?

(Q2) Tell me about successes that you experience when teaching CLD learners during your student teaching.

- ▫ Which courses helped you feel prepared?

(Q3) Tell me about challenges you experience when teaching CLD learners during your student teaching.

- ▫ How prepared do you feel to meet these challenges?
- ▫ What additional knowledge and skills do you feel that you need?

(Q4) What support did you have in your field placement to help you work with students with diverse learning needs?

Starting with Stories: Leveraging Children's and Adolescent Literature to Teach for Anti-Racist and Global Competence

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Abstract

As we consider the growing number of children from immigrant and refugee backgrounds that our schools serve, the importance of fostering anti-racist educators through teacher education is of the utmost importance. While anti-racist work can be a challenging and ongoing personal journey for every educator, engaging teacher education students with diverse children's and adolescent literature can lead to meaningful self-reflection that can foster empathy and global competence. This article shares how online university course modules were designed, with funding from the Longview Foundation, to support pre- and in-service educators to engage with children's and adolescent literature centered on the lived stories of immigrant and refugee families through scaffolded reading and thinking protocols as a model for using literature to encourage empathy and global competence with young learners. Pre- and in-service teachers reported several benefits, including an increased awareness of the importance of diverse literature, deepened self-reflection and empathy, and meaningful connections to classroom practice, thereby benefiting educators and their learners alike.

Keywords: anti-racist, children's literature, global competence, empathy, self-reflection

"Books and doors are the same thing. You open them, and you go through into another world."
– Jeanette Winterson

Setting the Landscape

In both teacher education and PK-12 education, educators are challenged to strengthen anti-racist education. This challenge is a complex one that includes hesitancies and barriers to a structured pedagogy of anti-racist education in teacher education programs (King, 2022) as well as current legislation and policies in many states that curtail teachers' freedom to explicitly integrate attention to racial, economic, and social justice in their teaching practice (Woo et al., 2023). Teachers themselves are often uncertain how to identify, understand, and respond to racism in schools (Arneback & Jämte, 2021).

Yet, the reality in our nation's schools is that nearly 80% of the teaching force is white while nearly 50% of PK-12 public school students are children of color (National Center for Education Statistics, 2019). Moreover, in 2020, more than 300,000 undocumented or asylum-seeking children were enrolled in U.S. public schools, with Virginia among the top ten states in which more than 75% of these newcomers settled (Culbertson et al., 2021). Children from refugee backgrounds have unique socio-emotional and academic needs, yet are often marginalized in U.S. schools, highlighting the urgency of focusing on the needs of refugee children in teacher education (Akay & Jaffe-Walter, 2021).

As teacher educators and scholars, we recognize that there are numerous structural and systemic barriers to enacting anti-racist education in teacher education and PK-12 contexts. We understand that anti-racist education in teacher education programs must seek to interrupt patterns of bias in classrooms through inviting current and future educators to critically reflect on their identities and explore ways to dismantle racist ideologies and systems that affect learning opportunities and outcomes for historically marginalized children and families (Bazemore-Bertrand & Porcher, 2020). We acknowledge that the work we share here represents a small

effort toward anti-racist education through fostering cultural humility and empathy for others whose lived experiences differ greatly from those of the dominant culture.

Teaching for global competence is an approach that invites critical reasoning, curiosity, and problem solving and is useful for developing empathy, perspective taking, and respect for people from diverse backgrounds. As Dr. Anthony Jackson, former vice president of the Center for Global Education at Asia Society, urged in 2021:

> If we are to root out racism, if we are to survive as a species, education in America and on a global scale must develop in youth the disposition to act more toward the common good than toward individual gain or group hegemony. (Jackson, 2021)

It is at this intersection of anti-racist and global competence education that we situate the present project.

This paper is a reflection describing a project that the authors undertook with the support of a Longview Foundation Innovation grant. The grant, entitled *Teaching for Anti-racist and Global Competence*, was created to develop stronger preparation of pre- and in-service teachers in developing their understanding of global issues surrounding refugees, immigrants, and racism.

Literature Review

The need to redesign teacher education programs to prepare today's educators for anti-racist pedagogy in racially, culturally, and linguistically diverse classrooms is urgent, complex work. Castro and colleagues (2023) anchor this work in theoretical and pedagogical foundations representing extensive, evolving scholarship that reflects the intersections of critical race theory in education (Ladson-Billings & Tate, 1995), culturally relevant pedagogy (Ladson-Billings, 2014), culturally responsive teaching (Gay, 2010), culturally relevant and sustaining pedagogies (Paris, 2012; Paris & Alim, 2014), critical race pedagogy and praxis (Howard & Navarro, 2016;

Ledesma & Calderon, 2015; Lynn & Parker, 2006, and racial literacy scholarship (Guinier, 2004; Oto, et al., 2022; Sealey-Ruiz, 2021; Twine, 2004). Castro and colleagues posited that these foundations have unique strengths that scholars and practitioners can apply to address issues of equity proposing that:

> a set of common teaching practices emerge which might inform teachers, teacher
>
> educators, and curriculum developers who adopt equity-oriented pedagogies. These
>
> practices include: honoring the cultural and community assets of students; making
>
> curriculum relevant for all students; raising critical consciousness and awareness of race
>
> and racism; tracing and challenging racist political, economic, and social structures; and
>
> challenging racism through counter-storytelling. (Castro et al., 2023, p. 44)

Current anti-racist education scholarship (Muhammad, 2020; Spaulding et al., 2021) emphasizes that "anti-racist education does not and should not begin with teaching about oppression, but rather with teaching the dream of a future in which all people live in their full humanity" (Vlach, 2022, p. 34).

Although beyond the scope of this article, as well as our own positionality and experience as teacher educators and scholars to define anti-racist pedagogy, we are committed to responding to the call to further explore these theories and their implications for teaching and curriculum. We situate the work we share here in the scholarship on ways that children's literature may be used to foster anti-racism and children's global competence for life and work in our globalized world.

Integrating Children's Literature as an Anti-racist and Global Competence Development Tool

Spencer (2022) conducted an action research study to investigate the relationship between the use of diverse children's literature and a teacher's development as a social justice educator. In this year-long study, teacher participants met in a Critical Children's Literature Group to discuss select anti-racist early childhood literature to critically reflect on the texts and enhance pedagogical knowledge. Findings included that teachers embraced the notion of using carefully selected stories to bring an otherwise unfamiliar world into the classroom environment in order to engage in anti-racist pedagogy. Spencer's work shares valuable considerations and resources for selecting inclusive and nuanced classroom texts that center diversity, equity, justice, and belonging. Similarly, Vlach (2022) emphasized that the standard U.S. literacy curricula are not built on foundations of cultural relevance, criticality, or social justice (Ladson-Billings, 2014) and that integrating anti-racist children's literature requires deep knowledge of curriculum, learning processes, and social context along with risk-taking to step away from the prescribed curriculum (Flores et al., 2019). Vlach offers examples that illustrate how children's literature can be integrated in units of study in third and fourth grade social studies and English language arts.

Across our nation and world, teacher education programs are tasked with supporting current and future educators to embrace and be responsive to the strengths and needs of children in increasingly diverse classrooms. This rich diversity demands that educators both develop intercultural and global competencies as well as to nurture these competencies in their learners (Boix Mansilla & Jackson, 2023; Papadopoulou et al., 2022). One well-developed framework on teaching for global competence defines *global competence* as the capacity to examine local,

global, and intercultural issues; understand and appreciate the perspectives and worldviews of others; engage in open appropriate, and effective interactions with people from different cultures; and act for collective well-being and sustainable development (Boix Mansilla & Jackson, 2023; OECD/Asia Society, 2018). This framework prompts educators to critically consider how to nurture the global competence dispositions that can advance inclusive and welcoming societies. Castro and colleagues (2023) argued that "changes in the demographic, educational, and sociopolitical landscape of schooling have made racial and cultural pedagogies vital necessities for the typical classroom" (p. 34). These scholars situated the urgency of this work in the current attacks in numerous states on teaching about race and equity along with the deliberate political conflation of critical race theory with culturally responsive teaching and equity-oriented approaches.

Many scholars have emphasized literature as a powerful way to engage with children around "difficult" topics (Wiseman et al., 2019). Riley and Crawford-Garrett (2016) emphasized the importance of the inclusion of critical texts in teacher education that "highlight salient categories of difference, give voice to those who have been historically silenced, provide examples of social action, explore systems of oppression, and include opportunities for posing questions about how and why societal positioning is maintained" (p. 94). Pfundheller and Liesch (2023) argued that educators must be prepared to critically analyze issues such as the way that race and culture shape children's learning experiences and that teachers should include children's literature that reflects the struggles faced by marginalized families. Flores and colleagues (2019) highlighted the possibilities for culturally responsive pedagogies that leverage children's literature as a resource for "windows, mirrors, and sliding glass doors" (Bishop, 1990; Thomas, 2016) in ways that honor the increasingly racially, culturally, and linguistically diverse learners

and families in our schools. This way of thinking about applying children's literature in teacher

education and K-12 teaching practice aligns with the development of global competence

dispositions and responds to the call to "reconsider and recommit researchers' and educators'

efforts toward promoting a more just and equitable world amidst turbulent times" (Castro et al.,

2023, p. 35). It is this vision that inspired our current project.

Group Positionality

We approached our project work and wrote this article from the lens of teacher educators,

scholars, and PK-12 practitioners who care deeply about equity and justice in learning

experiences and outcomes for children and families from historically marginalized groups and

communities. We bear witness in our work to the urgent need to nurture teachers' capacity to

embrace culturally and linguistically responsive and sustaining pedagogies within richly diverse,

fully inclusive classrooms. We are cis-gender females from varied racial and ethnic backgrounds.

Four of us identify as white and one as Hispanic. All of our lives have been enriched through

lived experiences in other countries and/or extensive interactions with culturally and

linguistically diverse family members, students, colleagues, friends, and acquaintances. We are

united in our dedication to fostering racial and social justice through our work, words, and

actions.

Project Description

As a core component of our project, we focused on revising three core courses in a

teacher education graduate program at a large university in the Commonwealth of Virginia. In

each asynchronous online course, we embedded new modules with guided experiences in

children's and adolescent literature centering on immigrant and refugee experiences. The

ongoing goal of the work is to engage pre- and in-service graduate students with research-based

strategies for teaching for global competence and anti-racist education. We attended specifically

to Global Thinking Routines (GTRs; Boix Mansilla et al., 2017). GTRs are micro-teaching tools

that can foster global competencies, such as inquiring about the world beyond one's immediate

environment, engaging learners in perspective taking of others' viewpoints, inviting respectful

dialog with diverse others, and sparking thinking around acting and advocating for a more just

and sustainable world (OECD/Asia Society, 2018). In this manuscript, we share a sampling of

the work undertaken in each of the three courses, as well as student responses to the work.

Throughout this paper, we use the term "student" to refer to the graduate students

enrolled in each of the three courses described here. These students vary in age, race, ethnicity

and language background and include American and international students, as well as both pre-

and inservice teachers. Most students in these courses are either current, licensed PK-12 teachers,

seeking a master's degree and an add-on ESOL endorsement to strengthen their knowledge for

teaching multilingual learners in content areas, or they are preservice teachers, seeking initial

licensure as ESOL teachers. Among the preservice teachers, students in these courses may

include undergraduates pursuing a Bachelor's to Accelerated Masters (BAM). Each of the

courses require 15 hours of fieldwork in accredited PK-12 school settings and include

mentorship by an ESOL teacher.

Collecting Student Responses

Although this reflective paper does not share a complete study, university IRB approval

was obtained for collection of student data and students who elected to participate provided

informed consent. Students enrolled in the three core courses were sent an email during the first

weeks of class informing them of the work that was being undertaken and inviting them to

participate in providing feedback. Students were given the option to provide feedback through a

survey and interview, as well as sharing their responses from discussion board conversations and

activities during the course, or simply sharing their course responses and activities. Students who

agreed to participate in providing feedback were not identified to the course instructor until after

final grades for the semester had been submitted.

Course 1: Child & Adolescent Development in Global Contexts

In the course 'Child and Adolescent Development in Global Contexts,' we revised three

learning modules to include activities that utilize children's literature to enhance anti-racist

instruction and global competence. Along with the inclusion of several different texts, we invited

students to use three different Visible Thinking Routines (Project Zero, 2022) when analyzing

the texts in order to: 1) deepen their personal thinking and analysis of the specific questions

posed in relation to the texts; and 2) increase their understanding of how using thinking routines

can facilitate their own students' awareness and understanding of global competence.

One module utilizes the children's book *The Name Jar* by Yangsook Choi. This story

centers on a new student from Korea whose name is not easily pronounced by her peers and who

considers adopting a Western name to fit into her new class. An overarching theme of the text is

how families and children grapple with the balance of assimilating to their new environments

while simultaneously maintaining their home identity and culture. Using the Visible Thinking

Routine, 'I Used to Think…. Now I Think…" (Project Zero, 2022) we created an individual

assignment inviting students to reflect on previous understandings of concepts such as

assimilation, identity, immigration, and bullying and then share how this thinking may have

changed after reading *The Name Jar*. Students engaged in the following application activity and

Discussion Board (See Table 1 for representative student responses):

- Is it better for students from other countries/cultures to assimilate into their new host

  country - adopt a name, clothing, and other cultural traits that help them fit in? Or is it

  more important/better to retain their home "identity?"

- What are some issues that might arise in either scenario?

- What are some strategies teachers can use to support the child's or family's decision,

  regardless of which path they take?

  In addition to this individual assignment, students participated in an online 'Discussion

Board conversation with their peers, sharing their thinking around the following questions:

- What are some of the unique characteristics of minorities and immigrants that can lead to

  bullying?

- How can teachers be more aware of these issues and help prevent bullying that targets

  immigrants and minorities (strategies they could use, lessons/activities, personal

  experiences (either as a teacher or as a student)?

Table 1

Student Responses to The Name Jar Activities

My reaction to the book was very emotional. When moving to America, a substitute mispronounced my name pretty horribly and I was bullied with that incorrect pronunciation of my name in my new middle school. This small mistake, which might have been a genuine attempt at pronouncing my name, led me to change the way I introduce myself and the name I go by in English settings...A small gesture to attempt to pronounce someone's name correctly can go a long way. **Stories such as these read from early ages show concrete examples of ways students can cultivate a climate of acceptance and inclusion**.

Rather than believing it was better for students from other countries to assimilate to their new environment, **I used to believe** that it was a natural and inevitable process. I did not consider the immense internal conflict that students would be experiencing to fit into a new and different culture. **Now I think**, especially after reading 'The Name Jar,' that students are faced with many internal and external conflicts when they enter a new culture.

Course 2: Introduction to Culturally and Linguistically Diverse Learners

In the course 'Introduction to Culturally and Linguistically Diverse Learners,' we begin by inviting teacher education students to consider the importance of teaching for global competence. To engage in this process, students explored the four domains of global competence embedded in the OECD/Asia Society (2018) framework: inquire about the world beyond their immediate environment, seek to understand multiple perspectives, communicate effectively with diverse others, and take action to create a more just and sustainable world. Through supplementary readings and online dialogue, students then examined how children's literature could be used to foster global competence and anti-racist education with PK-12 learners.

One pivotal activity in this course centers on viewing and listening to a digital version of *The Journey* by Francesa Sanna. This book, endorsed by Amnesty International UK and winner of the 2017 Ezra Jack Keats Book Award Honor, provides an avenue for students to consider how and why deeper knowledge about the experiences of children and families from refugee backgrounds could support their own meaningful work to integrate anti-racist education and foster global competence in their teaching. After reading *The Journey*, students participated in an application activity and Discussion Board (See Table 2 for representative responses). First, students engaged in a Global Thinking Routine (Boix Mansilla et al., 2017), the 3Ys, to consider the book's themes and practice a strategy that could be applied in their own PK-12 classrooms. The 3Ys Global Thinking Routine asks students to consider the following questions:

- Why might the right to a safe place to live matter to me?
- Why might the right to a safe place to live matter to the people around me (family, friends, city, nation)?
- Why might the right to a safe place to live matter to the world?

We asked students to respond to these prompts through the lens of the book *The Journey*. This individual assignment was then shared with the class through an online discussion board module, where students were asked to read and respond to their peers.

After sharing their responses to the 3Ys, students also viewed a video analysis of *The Journey* and engaged in reflective dialogue with their peers, using the following questions as thinking prompts:

- What is your thinking about the ways that children's literature may be used to foster global competence and anti-racism education?

- How does the video analysis shape your thinking around the careful thinking that teachers must do to select children's literature for use in the classroom?

- How might children's literature be used to foster reflection about and empathy for the challenging emotional journeys and experiences that many people endure?

- How might you make connections to your own students' emotions and the way that families face adversity in their own lives?

- In what ways does this weeks' content strengthen your own appreciation for and reflection about families' cultural/linguistic identities and funds of knowledge? Why do these understandings matter?

Table 2

Student Responses to The Journey Activities

I noticed that I was able to empathize greatly with the mother in this story, despite it being told from the perspective of her daughter. By listening to and looking at the images in the book several times, I was able to get a better understanding of the mother's perspective in this story. She may be, and likely is, just as scared as her daughter during their journey to what's going to be their new home, but she keeps on a 'brave face' for her children. Most of what I think about as an educator is the experience of refugee children, but it's also important to consider the struggles of their parents. To truly take on the mother's perspective in this story, it requires a reader to look beyond the literal text in the story and see the bigger picture of what this journey really entails for everyone involved.

The book makes us feel the "bad dream" of immigration, the anxiety of not knowing what is to come, the hope of a better life. I think this is why using art (books, paintings, poems, music, etc.) is so crucial to invoking that empathy on these topics. It is a way of deeping (sic) our dimensions of care, an alternate method to heightening our awareness.

Course 3: Language and Literacy in Global Contexts

In the 'Language and Literacy in Global Contexts' course, a key theme is developing understandings of sociocultural perspectives on literacy, literacy learning, and literature. To integrate the goals of the project within this course, we designed three modules to focus on choosing and using children's and adolescent literature in the classroom.

Central to this work is exploring how we choose and then use literature in our teaching. Readings and discussions that draw attention to what the story is, how it is told, and why it is told all matter deeply. After examining research about taking care to be critically conscious of our book choices, students engaged in reflective responses, allowing connections to be made, assumptions to be explored, and new ideas to be examined. The following prompts guided student reflection in a purposeful way (See Table 3 for a representative student response):

- Apply the reading to your own experience as a teacher or learner.

- Express your opinion on the ideas presented in the reading.

- Evaluate the information and ideas expressed in the reading.

- Reflect on challenges to your beliefs/attitudes/worldview.

Students were then assigned the task of selecting a piece of literature that would be poignant in their classroom to help young learners reflect about the lives and experiences of others. Students then developed and shared lesson ideas and classroom discussion strategies with their peers. This activity provided students with an opportunity to consider their reflection process, create meaningful ways to engage learners with the book, and gain other book and teaching ideas from their peers.

Table 3

Student Responses Evaluating Book Selections

I used to think just having diverse books in your classroom library was enough. I made the assumption that having accessibility to a variety of books shows acceptance from the teachers and the schools. I now know that just having them is not enough. I need to find as many ways to incorporate these stories into our learning. I need to elaborate not only on the literacy skill I want to teach but the connections the students can make to their cultures or lives.

Student Reaction, Responses, and Reflections

In this section, we share feedback that students provided after completing and reflecting on the newly integrated modules. This reflective paper shares our project team's initial reflection and discussion around students' feedback. We individually reviewed the collected data, noting individual interpretations, and then collaborated to share our thinking to identify the following emergent themes: promoting self-reflection for educators, building empathy for diverse student bodies, and providing meaningful connections to classroom practices. The themes are fluid and

often overlap but illustrate the span of students' thinking and reactions as they reflected about the immigrant and refugee experience through the use of literature.

Promoting Self Reflection

One major takeaway our students shared centered on the impact of exploring diverse children's and adolescent literature through their coursework and the self-reflection that process entailed. Children's literature is often described as windows, mirrors, and sliding glass doors (Bishop, 1990), meaning that books allow readers to see into other cultures, to see themselves reflected, and to step into others' experiences. Such literature can, therefore, be powerful for fostering self-reflection among teacher education students (Ness, 2019), particularly as they select children's books, prepare to read them with learners, and simultaneously explore global topics. One student shared:

> The children's literature gave me insight into ways issues of global significance can be incorporated into early childhood education. The children's literature we read also allowed me to step into the shoes of someone who is culturally/linguistically different from myself; in this way, I was able to take on diverse perspectives. The modules and discussion boards not only allowed me to gather valuable information about global education and cultural competence/responsiveness, but it also allowed me to dig deeper into my own thoughts and perceptions of the world and of education.

Another student expressed similar sentiments after engaging in the readings and activities: "As a reader, I got to go through the journey of adjusting to life in a new country (something I have no personal experience with), interacting with people of many different backgrounds, and eventually being reunited with his family."

Students found spaces for thinking about challenging global issues that brought the realities of others to light in real and meaningful ways. The stories allowed students to enter the lives and lived experiences of others and to gain insights, not just to the characters, but to themselves in a manner that invited curiosity, introspection, and reflection.

Building Empathy

Another major theme that emerged from student responses centered on the idea of building empathy. Hammer et al. (2003) define empathy as "the ability to take perspective or shift frame of reference vis-a-vis other cultures" (p. 425). Using children's literature provided an opportunity for students to delve into others' experiences, if just for a moment, which helped to foster empathy for the personal journeys of others.

Books like *The Journey* not only nurture empathy for others who have experienced forced migration or migration under duress, but also connect readers with incredible imagery that can evoke additional emotions and critical thinking. In reflecting on using *The Journey* in an elementary classroom, one student shared:

> I found The Journey powerful in its ability to viscerally share an immigrant experience with young audiences. It was emotionally specific to a universal immigrant journey experience, using its illustrations and pace of prose to invoke empathy for the characters' experience of loss, anxiety, anticipation, and excitement.

Another student stated:

> Combine stories with illustrations, as we have in children's picture books, and the emotions are compounded, reflecting two delivery methods for emotion, visual and verbal. To me, The Journey was absolutely this kind of art, words chosen to convey emotions of immigration meshed with illustrations designed to do the same. As with any

art, for us to connect with it, we must bring ourselves to it, our own interpretation of the

emotion(s) it's trying to convey. It's just as important to discuss our own interpretations

with others as it is to feel them. In this respect, experiencing and discussing children's

literature can be a powerful cultural bridge and method of teaching empathy in the

classroom.

Another student reflected on using the GTR 'Step-In, Step-Out, Step Back' in relation to

children's and adolescent literature:

As we've seen with our use of the Step in-Step out-Step back GTR, children's literature is

a powerful tool for allowing students to step inside a character's shoes and experience

situations how the character does. This aids in developing students' perspective taking

abilities which in turn will foster greater empathy. When students are able to take on the

perspectives of others, they begin to realize that we all have our own individual struggles

in life. Teachers can capitalize on the empathy students develop for the story's

character(s) to make these connections between students' own lives and the lives of the

character(s); this can help create a space for students to share their experiences and

emotions about how they may have faced adversity in their own lives.

The visual imagery of children's books like *The Journey* brings themes and implicit

messaging to life. Thinking about imagery allows students to connect with, understand, and

reflect upon experiences that are new or challenging for them to unpack. Compelling visuals

allow students an opportunity to connect with ideas that may elicit uncomfortable and raw

emotions, thereby providing a growth moment towards empathy. One student commented:

Reading, or looking rather, at the entire story extended my thinking by enabling me to see

a more first-hand view of what it's like to migrate to a new country, where everything

seems entirely different and confusing… Because this story is set in a fictional place and everything is different from how things are anywhere in the real world, it caused me to feel the same feelings of confusion at the main character's new surroundings. As a reader, I got to go through the journey of adjusting to life in a new country (something I have no personal experience with), interacting with people of many different backgrounds, and eventually being reunited…

Building empathy in both educators as well as their learners is critical for the success of anti-racist work and developing global competence within the classroom. In addition to self-reflection, our students gained useful strategies for nurturing empathy for others through children's and adolescent literature.

Connecting to Classroom Practice

The revised course modules were intentionally designed to offer educators immediately usable literature and reading structures adaptable to a variety of grade-levels and subjects. For example, students considered ways that Global Thinking Routines (GTRs; Boix Mansilla et al., 2017), such as 'Step In, Step Out, Step Back,' 'Beauty and Truth Routine,' and 'Think-Feel-Care-Reflect' can be adapted to help learners think critically about key themes and concepts from stories in age-appropriate ways.

Modules also tackled realistic issues faced by children and their teachers, such as bullying diverse others. The National Institute of Health (Maynard et al., 2016) reports that there is a global trend of immigrant youth being bullied more frequently than native born students, which can cause long-term stress and anxiety for targeted youth. As such, our students reported appreciation for the immediately usable literature, such as *The Name Jar* and *The Journey*, and the thinking routines utilized within the modules. One student reflected:

As we've seen with our use of the Step in-Step out-Step back GTR, children's literature is a powerful tool for allowing students to step inside a character's shoes and experience situations how the character does. This aids in developing students' perspective taking abilities which in turn will foster greater empathy. When students are able to take on the perspectives of others, they begin to realize that we all have our own individual struggles in life.

Another student connected the ideas within Eve Bunting's *One Green Apple* with their classroom instructional strategies:

Farah's experience highlighted the need to reconsider my approach when communicating and including students with language barriers in classroom activities. Rather than traditional structures of learning, it may have equal importance to integrate activities in the curriculum that evoke "communities of practice" within the classroom.... I am now very intrigued and looking forward to implementing and expanding upon this principal (sic) in my own art classroom.

A pre-service teacher, likewise, commented on her growing understanding of the role that children's literature can play:

As a pre-service teacher who hasn't yet experienced teaching elementary grades, I had no idea that there was such a vast amount of children's literature that can foster global competence and anti-racism. Being introduced to stories like One Green Apple and The Journey has shown me how children's literature can be used as a tool for promoting global competence. Although I know I have benefitted from reading these stories -- I've gained valuable knowledge about what the experience of migration is like for refugees,

and how immigrant and/or refugee students may be feeling in their new school environments.

Attaching realistic routines, like GTRs, to reading diverse literature with complex themes can build critical thinking and interpersonal skills between learners that may lead to greater global competence. As one student said:

I will definitely use the anti-racism instructional strategies presented in this course. I see the use of diverse children's literature in the classroom as a particularly point of power to promote a classroom community that is caring and empathetically curious. Introducing students to a diverse collection of literary experiences could help facilitate real-world conversations that might encourage students to seek and create supportive and empathetic communities in their lives going forward.

In addition to providing useful strategies for educators to build empathy and understanding of others, teaching diverse literature centered on immigrants' stories can create a safer and more inclusive classroom for newcomer learners. As one student stated:

I definitely want to use many of the anti-racism instructional strategies that were presented in this course. As a future ESOL teacher, it'll be important for me to make sure that all of my [culturally and linguistically diverse] students feel supported and respected by myself, their classmates, and other educators. This means ensuring that my classrooms are culturally responsive/sustaining and that students understand the impact of their words/actions towards one another.

Including literature reflective of the lived experiences of children and families from immigrant and refugee backgrounds supports the creation of a safe, inclusive, and productive classroom for

all learners. Being able to take these ideas directly to the classroom was frequently cited as a powerful component of the classes by our students.

Conclusions

Working to become an anti-racist educator in both thought and practice is daunting work, requiring diligent and ongoing self-reflection, rethinking pedagogical frameworks, and developing skills not only within educators themselves, but also with their young learners. Furthermore, there is no concrete finish line for this type of work. However, the structures provided in the learning modules within these three core courses offered tangible ways to build anti-racist literature and global competence routines into classrooms.

Given the diversity of students in our classrooms, the lack of diversity within the teaching profession, and the increase in newly arrived students from refugee and immigrant backgrounds into our classrooms, encouraging pre- and in-service teachers to develop skills for anti-racist and global competence teaching, like fostering empathy for others, is a meaningful effort that can benefit our PK-12 learners. The learning activities in the modules not only help current and future teachers build global competences themselves through scaffolded reading and thinking protocols around literature, but also model appropriate ways for using texts and thinking routines with their own learners.

Using books like *The Name Jar* by Yangsook Choi and *The Journey* by Francesa Sanna with reading structures such as Global Thinking Routines engages educators and their learners in building empathy for newly arrived students and understanding the difficulty that is being an immigrant or refugee. Texts like these also provide children from immigrant and refugee backgrounds with mirrors and windows for seeing themselves in classroom literature. The Visible and Global Thinking Routines provide teachers and their learners with safe ways for

processing texts with complex themes in a way that can build global competencies, namely

empathy for others and perspective taking.

Finally, teaching diverse literature through stories that center around newly arrived

immigrants and refugees offers educators an opportunity to engage in critical self-reflection. As

one student stated, "...being aware of our bias and our own culture and constantly learning about

the different cultures we come into contact within our school communities can model acceptance

and awareness of diverse students." Young people learn both through formal pedagogical

approaches, as well as through informal means, such as modeling behavior. Interacting with

diverse texts affords educators an opportunity to build and model empathetic behavior.

Embedding the kind of experiences with literature we have shared can encourage teacher

education students to move past understanding surface-level themes and content and move into

empathy building, perspective taking, and critical thinking skills, all of which are key for anti-

racist and global competence initiatives to be successful at the classroom level.

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Using Concept Maps to Analyze Educators' Conceptions of STEM Education

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Abstract

This study analyzes educators' conceptions of STEM education at the beginning of an online graduate course for in-service teachers. It offers a qualitative thematic analysis of educators' initial conception of STEM education and their roles as STEM educators through the use of concept maps and reflection statements. Conceptions of STEM varied greatly across the sample and fell into seven categories: (a) utilitarian, (b) acquisition of disciplinary knowledge, (c) activities and resources, (d) meaningful problem-solving experiences, (e) advocacy for systemic change, (f) buzzwords, and (g) educator's role in STEM teaching and learning. This study reveals the complexity of educators' ideas of STEM and educator roles within STEM education. Using concept maps as formative assessments can better position teacher educators to provide structured reflection space for educators while aligning coursework and resources to better meet educators' varied needs.

Keywords: teacher education, STEM education, teacher conceptions

Since its inception, STEM education has become a national priority in PK-12 schooling (National Academy of Engineering [NAE] & National Research Council [NRC], 2014). Viewed as a way to increase national power and prosperity, STEM education is tied to national goals and policy (Granovskiy, 2018). STEM education is also tied to more equitable and supportive learning environments, giving learners broad access to learning (Peters-Burton & Knight, 2022). Given the economic, political, and equity-related outcomes of STEM education, it is no wonder that federal legislators have prioritized STEM education initiatives, introducing over 300 bills related to science education from 1997-2018 (Granovskiy, 2018). While science education and STEM education are not inherently interchangeable, many agencies and legislative bills transpose the two concepts. Despite this lack of consensus on the definition of STEM education in PK-12 education, federal and state agencies prioritize funding STEM initiatives (Vasquez,

2015). U.S. federal investments in STEM education are estimated to amount to $3 billion annually, although the number is difficult to estimate due to different agency definitions of STEM education (Granovskiy, 2018). While the U.S. government's valuation of STEM education is apparent, there is no consensus on what STEM education means.

Federal definitions range from the generally broad definition of STEM used by the National Science Foundation that includes psychology, social sciences, physical and life sciences, and engineering, to the more narrow definition from the Department of Homeland Security that only focuses on mathematics, chemistry, physics, computer and information sciences, and engineering (Granovskiy, 2018). Even education researchers face difficulty defining STEM education but have reached some consensus. In the broad spectrum of STEM definitions, several common goals can be found: STEM education should use real-world contexts, focus on student-centered pedagogies, support 21st-century skills, and encourage reflective citizens' development (Bybee, 2018; English, 2017; Margot & Kettler, 2019; Moore et al., 2020; Nadelson & Seifert, 2017). The STEM disciplines share concepts, skills, and practices that can be transferred across disciplines (Moore et al., 2020), which students need to develop as global citizens and be prepared for STEM careers (Koehler et al., 2021). Even with these common goals, the pathways to achieve them are contested with implementations of STEM education ranging from a single discipline focus emphasizing science, technology, engineering, *or* math to a transdisciplinary focus that must include all four disciplines in an integrated fashion (Bybee, 2018).

This ambiguity extends to educators' conceptions of STEM education (Dare et al., 2019), as educators have varied STEM experiences and views on what integrated STEM is and how it should be implemented (Holincheck & Galanti, 2022). Although many educators may not be

able to define STEM education clearly, they have a sense of what it is not, rejecting overly vague and simple disciplinary models (Dare et al., 2019). Complicating matters for educators is the push towards "STEM for all." On its face, "STEM for all" is a seemingly beneficial way to engage minoritized students in STEM subjects and encourage their growth as future STEM professionals (Handelsman & Smith, 2016). However, "STEM for all" creates a false universality that outwardly declares STEM is for all students when many students' experiences show that science is indeed just for some (Sheth, 2019). The systemic inequities inherent in STEM education are often invisible due to their regularity. As teachers implement initiatives like "STEM for all," they may unknowingly subject students to injustices due to commonplace teaching practices (Calabrese Barton & Tan, 2020).

As the individuals responsible for implementing many STEM education initiatives, knowing how educators conceptualize STEM education is imperative for administrators, teacher educators, researchers, and policymakers (Navy et al., 2020). This research offers a qualitative thematic analysis of educators' initial conceptions of STEM education and their roles as STEM educators through concept maps and reflection statements.

Literature Review

The importance of STEM education has only grown since the launch of Sputnik in the 1950s (Granovskiy, 2018; Koehler et al., 2021). Following the grim picture of American science and mathematics education identified in the *A Nation at Risk* report (Gardner, 1983), U.S. researchers and curriculum developers began a trend to integrate science, engineering, technology, and mathematics components (Koehler et al., 2021). What was once seen as a geopolitical statement is now seen as an economic amplifier. The America COMPETES Act (2007) and its reauthorizations (America COMPETES 2010, 2022) showcase the importance of

STEM jobs to national economic security. Furthermore, STEM education is one of the main sources of STEM knowledge and skills for the American public. As such, the federal government spends around $3 billion yearly on STEM education initiatives and closely watches indirect metrics of STEM education success, including student success on international science and math exams and the number of students completing STEM degrees (Granovskiy, 2018). STEM literacy is often seen as a pathway toward social and economic well-being (Mohr-Schroeder et al., 2020).

Although economic factors are often cited as why we should teach STEM, there are more student-centered benefits to increasing students' STEM literacy. These benefits include making students better innovators, inventors, problem-solvers, and logical thinkers (Morrison, 2006). Stohlmann et al. (2012) maintain that integrating STEM disciplines positively impacts students' interest in school, motivation to learn, and achievement. Additionally, integrated curricula improve higher-level thinking skills and retention (Stohlmann et al., 2012). Further benefits of STEM education include strengthening students' ability to transfer and connect knowledge across disciplines, gaining practical experience, and developing technological skills (Martín-Páez et al., 2019).

As a vehicle of economic success and deeper student learning, STEM has also been championed as a way to advance equity. However, its success is still unproven (Bullock, 2017). Historically, anti-Blackness within schooling has affected students' access to equitable STEM learning opportunities, further reshaping their academic possibilities in secondary and post-secondary education (Madkins & Morton, 2021). Some, primarily White, students' ideas and lived experiences are centered over those of other, often minoritized, students (Sheth, 2019). This impacts career options later in life, as Black and Hispanic workers are significantly

underrepresented in the science and engineering workforce in the United States (Le & Matias,

2019). However, only fixating on inequitable outcomes subverts attention from the underlying

systemic inequities in STEM education and its implementation in classrooms (Le & Matias,

2019).

Difficulties in Defining STEM Education

Considered by policy-makers at national, state, and local levels as a way to continue

prosperity and progress in the global marketplace by preparing future STEM professionals

(Roehrig et al., 2021), STEM has been used as a framework to integrate the disciplines to better

reflect today's complex problems and interdisciplinary solutions (Bybee, 2018; English, 2017).

STEM education is a national priority (NAE & NRC, 2014), yet there remains a lack of

consensus on what STEM means or how to implement it (Bybee, 2018; English, 2017; Moore et

al., 2020). At times, STEM includes only one of the four disciplines. Some interpret it as four

distinct, equally important disciplines. Others contend that STEM requires intentionally

integrating several of the four disciplines (English, 2017; Moore et al., 2021).

Today's problems are increasingly complex, and their solutions require the integration of

multiple disciplines, concepts, and skills (Roehrig et al., 2021), yet there remains debate on the

conceptualization of STEM integration in PK-12 education (Bybee, 2018; Moore et al., 2020).

Moore and colleagues (2021) contend that it must include five pedagogical practices: (1) the

content of at least one science and mathematics discipline defines some of the primary learning

goals; (2) engineering practices and engineering design of technologies acts as the integrator; (3)

scientific and mathematical concepts are linked to the engineering design or engineering

practices through design justification; (4) 21st Century Skills are emphasized; (5) the instruction

requires solving a real-world problem or task through teamwork. However, contextual barriers,

including pedagogical challenges, curriculum constraints, and inflexible structures, can make

integrated STEM difficult to implement universally (Holincheck & Galanti, 2022; Margot &

Kettler, 2019; Nadelson & Seifert, 2017; So et al., 2021). In response, Nadelson and Seifert's

(2017) spectrum of STEM promotes a mixture of segregated foundational knowledge with

integrated STEM pedagogy and provides a flexible template for overcoming contextual barriers.

As a current secondary science educator in a doctoral program, my experience informs

my assumptions about integrated STEM education and its implementation. I draw upon

Nadelson and Seifert's (2017) definition of integrated STEM as "the seamless amalgamation of

content and concepts from multiple STEM disciplines… considered…in the context of a

problem, project, or task" (p. 221). Following the commonalities across the field, I also extend

my definition to include using real-world contexts, student-centered pedagogies, and supporting

21st-century skills (English, 2017; Margot & Kettler, 2019).

Importance of Teacher Conceptions of STEM Education

Educators work in the tension between how STEM is used in common parlance and how

it is incorporated into educational environments (Navy et al., 2020). The ambiguity surrounding

STEM makes communicating expectations for educators problematic (Dare et al., 2019).

Integrated STEM initiatives have grown in popularity, although their success largely depends on

an educator's ability to connect the disciplines explicitly (Dare et al., 2018). Building educators'

STEM content knowledge is crucial as it positively correlates to educator efficacy, confidence,

and comfort in STEM content (Margot & Kettler, 2019). Successful STEM integration includes

explicit teaching of STEM concepts and STEM processes (Kelley & Knowles, 2016).

Pedagogical changes are also necessary: STEM pedagogy requires a shift from the sage-

on-the-stage mentality towards the guide-on-the-side (Margot & Kettler, 2019). To foster

creativity and increase engagement, educators may benefit from the meddler-in-the-middle role, which involves the educator providing support and direction through activities in which they are also involved, re-positioning educators and learners as partners in learning (McWilliam, 2009). Educators should also have the guidance and support to confront the inherent inequities in STEM education (Le & Matias, 2019) because teachers are unlikely to change their pedagogy if their conception of content has not changed (Ring-Whalen et al., 2018). As ongoing professional learning opportunities addressing content and pedagogical concerns influence educator practice and implementation of STEM education, teacher educators must develop tailored learning opportunities for educators to feel supported in STEM implementation (Margot & Kettler, 2019).

Kelley and Knowles (2016) argue that professional learning opportunities should incorporate a strong conceptual framework of STEM education to help educators build confidence. They advocate for explicit teacher learning on key learning theories, pedagogical approaches, content knowledge, and current STEM educational research inclusion within educator practices (Kelley & Knowles, 2016). There is a critical need to identify how teachers conceptualize STEM education in order to support them in its implementation, yet there is limited evidence of teachers' conception of STEM education in a professional learning context (Dare et al., 2019).

Method

This study attempts to understand educators' pre-existing conceptions of integrated STEM education and their roles as educators in STEM. The following research questions guided this study:

(1) How do concept maps as formative assessments reveal how educators view integrated STEM teaching and learning?

(2) What do educators view as their role in integrated STEM teaching and learning?

This study builds upon previous work by Holincheck and Galanti (2022) by analyzing concept maps as formative assessments. Concept maps have the unique ability to capture the layering of ideas, connections, and the depth of language based on prior experience (So et al., 2021).

Participants

A total of six educators participated in this study. Participants included high school educators (n=2), middle school educators (n=2), an elementary educator (n=1), and a pre-service educator with high school substitute teacher experience (n=1). Of the six participants, five had fewer than four years of experience as educators, while the remaining educators reported 11 years of experience. Participants taught math (n=2), science (n=2), general content (n=1), and English (n=1).

Study Context and Data Collection

Participants in the study were enrolled in an online graduate-level course on STEM education, which was part of a graduate education program for in-service teachers at a large public university in the mid-Atlantic. It is an elective for an advanced master's degree program in teaching and learning for PK-12 educators and was primarily taught asynchronously. Learning objectives centered on Nadelson & Seifert's (2017) definition of integrated STEM teaching and weekly modules and assignments challenged students to identify and apply methods to teach integrated STEM, emphasizing equitable access.

The data analyzed were collected via a purposeful set of asynchronous activities during the first week of the course. Following Holincheck and Galanti's (2022) protocol, students answered the open-response question, "Do you consider yourself to be a STEM teacher? Why or

why not?" To activate prior knowledge, they were assigned readings on STEM integration

(Vasquez, 2015) and equity in STEM (Mensah, 2021) and then asked to draw a concept map.

The prompts for the concept map were changed from (1) What is your understanding or

conception of *STEM education*? [emphasis added] and (2) What do you see as the most

important ideas and sub-ideas? (Holincheck & Galanti, 2022) to (1) What is your understanding

or conception of *STEM teaching and learning?* [emphasis added] and (2) What do you see as the

most important ideas and sub-ideas? While the original goal of capturing personal and

professional perspectives about STEM teaching and education remained, the wording was

changed to intentionally focus on the teaching and learning processes rather than the education

system.

To further develop my understanding of the educators' conceptions of their role as a

STEM educator, open-response questions were asked at the conclusion of the course and

included "Do you consider yourself to be a STEM teacher? Why or why not?" as well as "Do

you think others see you as a STEM teacher? Why or Why not?" Responses were used to

provide further context for the educators' views on STEM education.

Data Analysis

Concept maps were analyzed using in vivo open and descriptive coding, allowing me to

examine the language used, the nature of the words (e.g. nouns, action verbs, and descriptors),

and the connections between concepts. (Saldaña, 2021). Analysis of emergent themes permitted

the usage of the six final themes from Holincheck and Galanti's (2022) previous study, with the

addition of a new category: educator role in STEM education. Responses to the open-ended

questions "Are you a STEM teacher? Why or why not?" were used as supporting data to provide

further context to the concept maps.

Using the framework established by Holincheck and Galanti (2022), six categories of teacher conceptions within the concept maps were identified. Data analysis required the addition of the educator role category for a total of seven categories. Overall, each of the concept maps focused on one or more of the following aspects of STEM education: (a) utilitarian, (b) acquisition of disciplinary knowledge, (c) activities and resources, (d) access to meaningful problem-solving experiences, (e) advocacy for systemic change, (f) buzzwords, and (g) educator role in STEM education. Each concept map represented at least one theme, while several encompassed several themes, showcasing the educators' ability to hold various conceptions of STEM education.

Findings

Analysis of concept maps revealed a consistent use of terms and connections. Each individual's maps fit into at least one of seven categories. While each map exhibited a strong pull towards a particular category, most maps touched upon multiple categories.

Utilitarian

Teachers with a utilitarian view of STEM education focus on STEM careers and the practical or economic benefits of focusing on STEM. Two of the six concept maps explicitly included careers or future workforce considerations (see Figures 1 and 2). One included long-term benefits and higher-paying jobs as part of being a STEM student (see Figure 1). The second (see Figure 2) included the future workforce as part of being a STEM student. That only two concept maps explicitly noted STEM careers is surprising, as much of the focus on STEM has been career-readiness (Roehrig et al., 2021). One educator (see Figure 3) included industry and its funding of STEM education, noting that industry values a STEM-literate future workforce.

Acquisition of Disciplinary Knowledge

Teachers with a disciplinary view of STEM education focused on science, technology, engineering, and/or math individually rather than STEM as an integrated discipline. Four educators included the four disciplines in their concept maps. Of those, two created their own main topic of "content" with no connections to other concepts, thus removing the disciplinary content from any context (see Figures 1 and 4). The remaining two placed the four disciplines under the heading of STEM teacher or educator, indicating the educator as primarily responsible for discipline-based content delivery (see Figures 2 and 5). No interdisciplinary linkage occurred across the four that included the disciplines, indicating a traditional siloed view of the content areas. Several maps included "cross-curricular" (see Figure 5), "interdisciplinary," transdisciplinary," and "multidisciplinary" (see Figure 4). Both individuals treated those terms as buzzwords, with no connections or linkages to show a deeper understanding. One educator embraced an interdisciplinary approach and explicitly mentioned collaborating with colleagues to make learning interdisciplinary (see Figure 6). Interestingly, this educator primarily taught high school English but indicated a desire to bring STEM skills into their class.

Activities and Resources

Teachers who represented STEM as an amalgamation of activities and resources illustrated a teacher-centered view prioritizing tools and methods over problem-solving. Basic pedagogical tools that could be used in any discipline were commonly used, such as addressing misconceptions (see Figure 5), backward design (see Figure 6), and hands-on learning (see Figures 1, 2, 5, and 6). While all the stated pedagogical tools are useful in STEM education, they are not a significant component of STEM nor used exclusively in STEM education. One educator drew a connection between industry supplying materials for STEM educators and was

the only one who connected STEM teaching and learning to industrial stakeholders (see Figure 3).

Access to Meaningful Problem-Solving Experiences

Teachers who view STEM as access to meaningful problem-solving experiences focused on student-centered learning through engaging and immersive opportunities connected to real-world problem-solving. Real-world problem-solving experiences are one of the main goals of STEM education, and it was promising that most of the educators included this in their concept maps. While five educators mentioned problem-solving or project learning (see Figures 1, 2, 4, 5, and 6), only two expanded their thoughts or explicitly linked to other concepts. This may suggest a positive view of the concept but a lack of understanding of *how* to implement it in the classroom. Of the two that expanded upon problem-solving and immersive experiences, only one, an English teacher, focused on "real world" problems and noted that "students learn from their mistakes," which leads to "real learning happen[ing]" (see Figure 6). The sole elementary educator included "real world learning" with "funds of knowledge," "identity exploration," and "problem solving with peers" as important concepts under "STEM student" (see Figure 1). This suggests a student-centered mindset, although, in the open-ended survey response, this educator flatly denied being a STEM teacher as "we have a STEM teacher at the school I work at."

Advocacy for Systemic Change

Educators predisposed to advocate for systemic change viewed STEM as key to addressing equity. While four concept maps referenced making instruction culturally relevant or advocated for students using funds of knowledge (see Figures 1, 2, 4, and 5), most teachers who used the terms provided no context for them and failed to link them to other concepts, perhaps demonstrating an awareness of the vocabulary without an understanding of what it would mean

to engage in culturally relevant teaching practices in STEM. One educator provided additional

context and depth to culturally relevant instruction, noting the importance of both

"incorporat[ing] students' culture and background knowledge" and "knowing their students" (see

Figure 1).

An additional participant, a pre-service educator, acknowledged the barriers inherent in

STEM education (see Figure 3). Seemingly cognizant of the systemic barriers in place, this

educator labeled a dashed line "forms barriers." This dashed line begins with money, culture, and

government and separates STEM students from STEM education and industry. This educator

was also the only one to acknowledge governmental and industrial influence on STEM

education. While this student focused on systemic issues, they did not include students, teachers,

or pedagogical concerns on their map.

Buzzwords

Educators with a buzzword conception described STEM as a collection of words without

meaningful connections. Many words, such as cultural relevance, transdisciplinary, and problem-

based, were recycled from the readings without contextualizing them. Three concept maps show

evidence of buzzword thinking indicating interest in STEM but an inability to conceptualize

what it may look like in a classroom. One concept map, in particular, was comprised mainly of

buzzwords floating outside main concepts (see Figure 4). This educator clarified in their

reflection that they viewed themself as a STEM teacher because they "incorporate

interdisciplinary teaching into all my classes," however, their concept map suggests a lack of

understanding of the application of STEM initiatives.

Educator Role in STEM Education

Integrated STEM education requires a mindset change from teacher-led instruction to collaborative meddling (McWilliam, 2009). It was heartening that three of the six concept maps included a relationship between the educator and the learner. One showed a linkage noting "we teach each other!" above the connection (see Figure 6). The other two incorporated a much more cyclical relationship where the educator creates (see Figure 3) or remains (see Figure 2) a learner, and the learner becomes the educator (see Figures 2 and 3). This interplay between learner and educator demonstrates a move towards meddling rather than the traditional teacher-centered pedagogy. This is augmented by the educator who viewed their role as a "learner," "motivator/encourager," and "expert" (see Figure 2).

The lack of connection between learners and educators in the remaining three concept maps may indicate a gap in their integrated STEM knowledge, which can lead to a more teacher-centric view due to a lack of confidence in the content. In reviewing their open-ended responses, one indicated a segregated STEM view but was interested in finding "ways to become more of a STEM Teacher *[sic]*," one indicated they were not a STEM teacher, and the final educator indicated they viewed themselves as a STEM teacher who incorporates interdisciplinary teaching.

Discussion of Findings

This study builds upon prior research on PK-12 teachers' conceptions of STEM education (Dare et al., 2019; Holincheck & Galanti, 2022) and provides additional insight into how concept maps can be used as formative assessments to understand educators' conceptions of integrated STEM teaching and learning and their role within it. While previous research had educators rank STEM models for conceptual baselines (Dare et al., 2019) and used visual concept maps to elicit

visual representations of educator conception of STEM (Holincheck & Galanti, 2022), this research extends previous work by additionally analyzing educators' view of their role as a part of STEM teaching and learning. The course instructor refined the prompt for the concept map assignment to provide space for teachers to explore their role in STEM teaching and learning and emphasize teachers' actions.

The data indicates that educators hold varied and, at times, multiple conceptions of STEM education and their roles as STEM educators. By allowing educators to layer ideas, illustrate connections, and incorporate their prior experience into their definitions, concept maps showed the educators' coordinating and conflicting conceptions of STEM education. Educators' responses to the question "Are you a STEM teacher?" further buttressed the use of concept maps as a lens to view educator conceptions of STEM education. Understanding educator conceptions of STEM education is useful for teacher educators, teacher preparation programs, and STEM education researchers.

Conclusions and Implications

Although a stated national priority, STEM education lacks a cohesive definition or framework (Bybee, 2018; Moore et al., 2020). In order to work together and collaborate across the field of STEM education, it is important to have shared definitions and terms (Dare et al., 2019). As the ones implementing STEM education initiatives, it is essential to elicit educators' conceptions. Capturing educators' views of STEM education and their roles as STEM educators allows teacher educators to focus their efforts on ways to build educator confidence in professional learning environments (Margot & Kettler, 2019). By allowing educators space to develop their definition of STEM education, teacher educators can better equip them with tools and resources to implement STEM initiatives in their community. Teacher educators should

encourage the explicit development of STEM educator roles. It is incumbent upon teacher educators to recognize that each individual has a preconceived notion of STEM education and STEM educators' roles. Teacher educators play a key role in challenging problematic notions, particularly the widely held belief that STEM is inherently unbiased (Sheth, 2019). By helping educators understand their unconscious biases and encouraging discussions of racism and Whiteness within STEM education, teacher educators can disrupt the cycle of hegemonic racism and implicit biases present in education (Miller et al., 2023). Future research should explore using revised concept maps as continued formative assessments in professional learning settings.

Implications

Teacher educators can use formative assessments like the ones described in this paper to check for alignment with their own definitions and priorities in STEM education. Given that concept maps externalize a participant's internal thoughts and understandings of concepts, they can be used to initiate reflection. Reflection is essential for teacher educators to facilitate, as it encourages the growth of an educator's identity. Encouraging educators to assess if their practices align with their ideals (as seen in concept maps) allows them to confront inner discord and promote professional experimentation in alignment with their knowledge, beliefs, and attitudes (Clarke & Hollingsworth, 2002).

To adequately meet the needs of diverse students, educators' conceptualization of STEM education must include their understanding of how equity relates to how we imagine science, technology, engineering, and math (Le & Matias, 2019). As we encourage educators to integrate STEM disciplines into real-world contexts, educators must also be aware of STEM's intersectionality with contemporary (in)justices (Calabrese Barton & Tan, 2020). It is incumbent on teacher educators to elicit ideas about and provide a safe space for discomforting discussions

about race and inequity in order to break racism's hegemonic stronghold in the classroom. In

order to promote equity through STEM education, educators will need support in reflecting on

the institutional anti-Blackness inherent in education and how students' lived experiences

intersect with STEM content.

In order to implement STEM education initiatives, educators must navigate the multiple

definitions of STEM education used by researchers, policy-makers, and their communities. The

ambiguity surrounding STEM education leads to unclear expectations for educators (Dare et al.,

2019). STEM education researchers can help alleviate this tension for educators by providing

educators a voice in STEM education research. Appreciating educators' STEM education

conceptions through concept maps allows researchers to see what topics are often linked by

practitioners. This also provides researchers the unique ability to see commonalities across

STEM education from the people who implement it.

Limitations

This study has a very small sample size, and it is not possible to generalize the findings to

a larger population. Another constraint of this study is, due to the structure of the course,

participants only made one version of the concept map with no encouragement to revise as they

continued the course. Because of this, the participants' ability to make further connections within

STEM teaching and learning cannot be analyzed. Further research could focus on encouraging

participants to explain their concept maps, as there may be aspects of their STEM teaching and

learning conceptions that participants may have deemed too insignificant or obvious to include

on their official maps.

Pathways Forward

All too often, STEM education is defined by policymakers, researchers, or industry. In order to work together and collaborate, it is important to have shared definitions. As the ones implementing STEM education initiatives, it is essential to elicit educators' conceptions. A broad nationwide definition of STEM may hinder some integration initiatives; however, developing a common conceptual standard in a community may lead to more meaningful integration (Dare et al., 2019). Further research should be done on understanding educator conceptions of STEM education and using those to develop community-based conceptions of STEM education. Teacher educators are uniquely positioned to facilitate the creation of a collaborative definition of STEM education, and further research should be explored in this area. STEM education researchers should also be interested in furthering this work to understand educator interpretations of STEM education better. The open-ended nature of concept maps allows for authentic conceptualizations of STEM and provides a springboard for researchers to pinpoint trends and commonly held beliefs across STEM educators.

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Figures

Figure 1

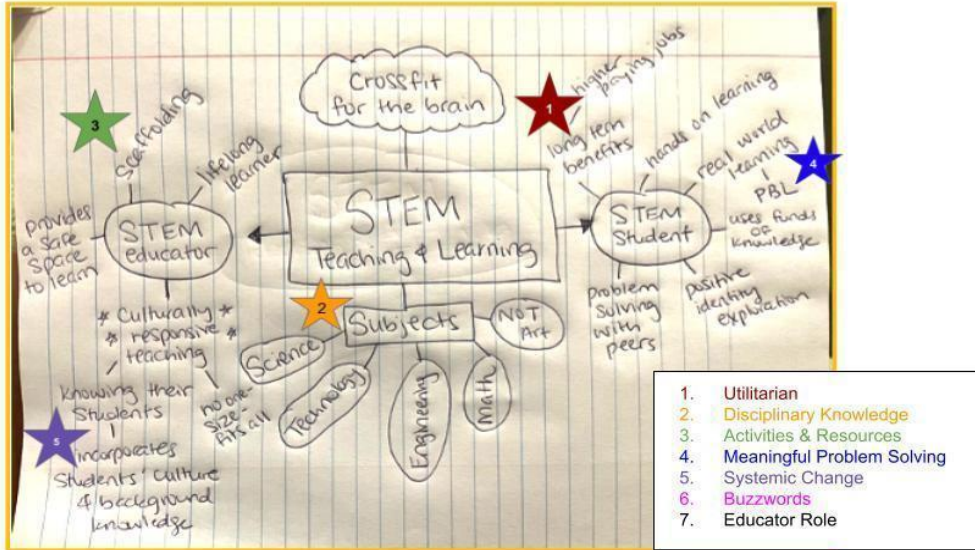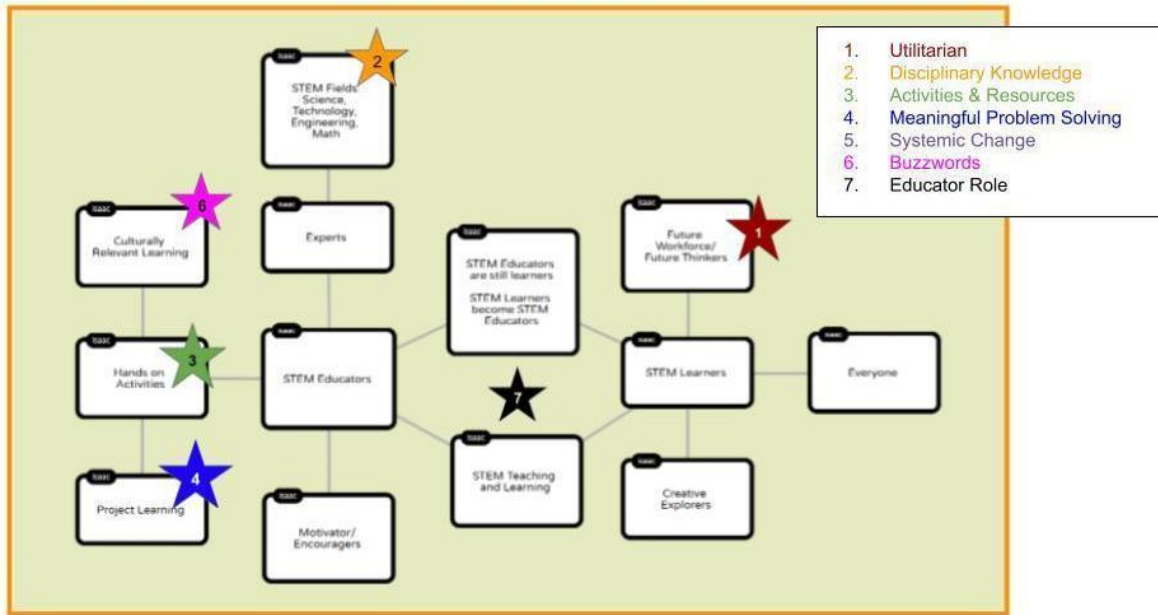*Educator 1's Concept Map*

Figure 2

Educator 2's Concept Map
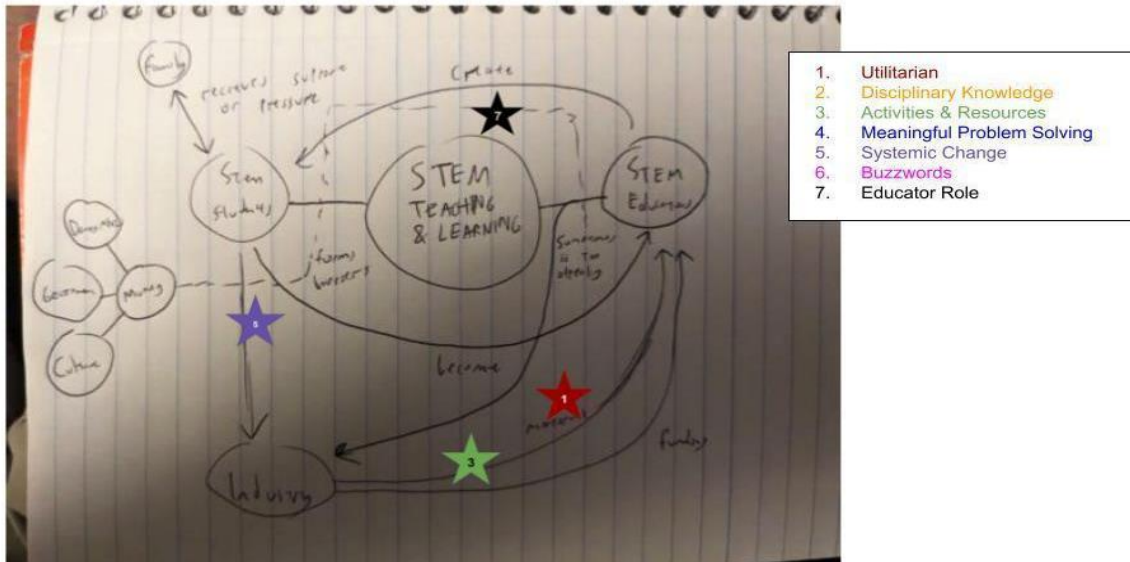
Figure 3

Educator 3's Concept Map

Figure 4

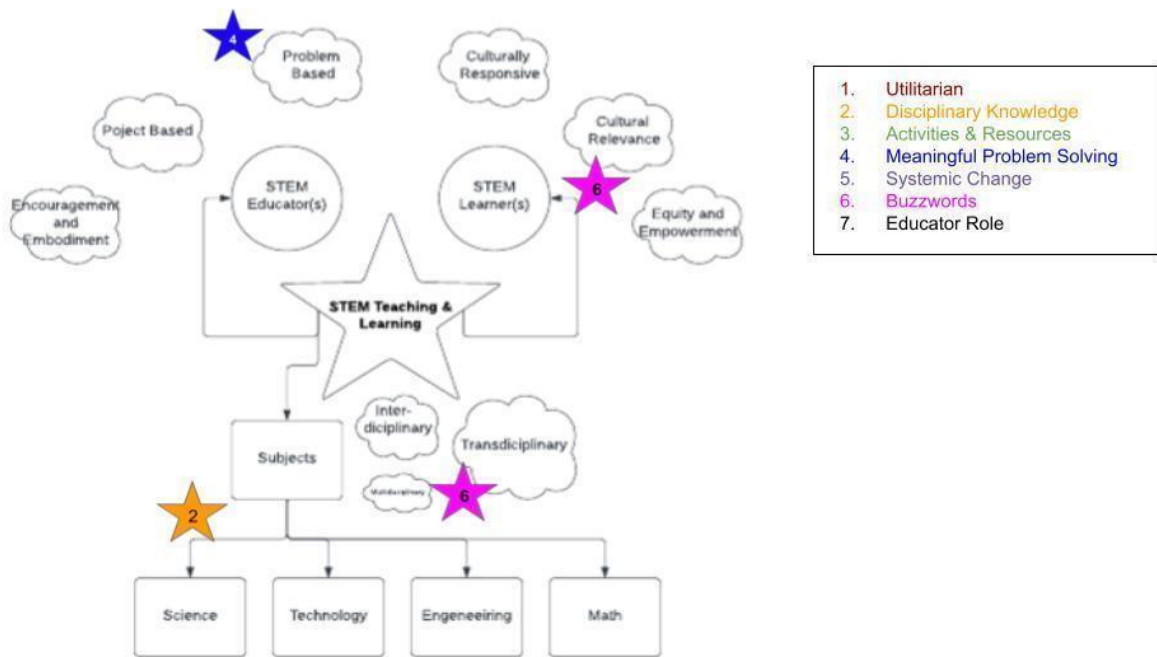*Educator 4's Concept Map*

Figure 5
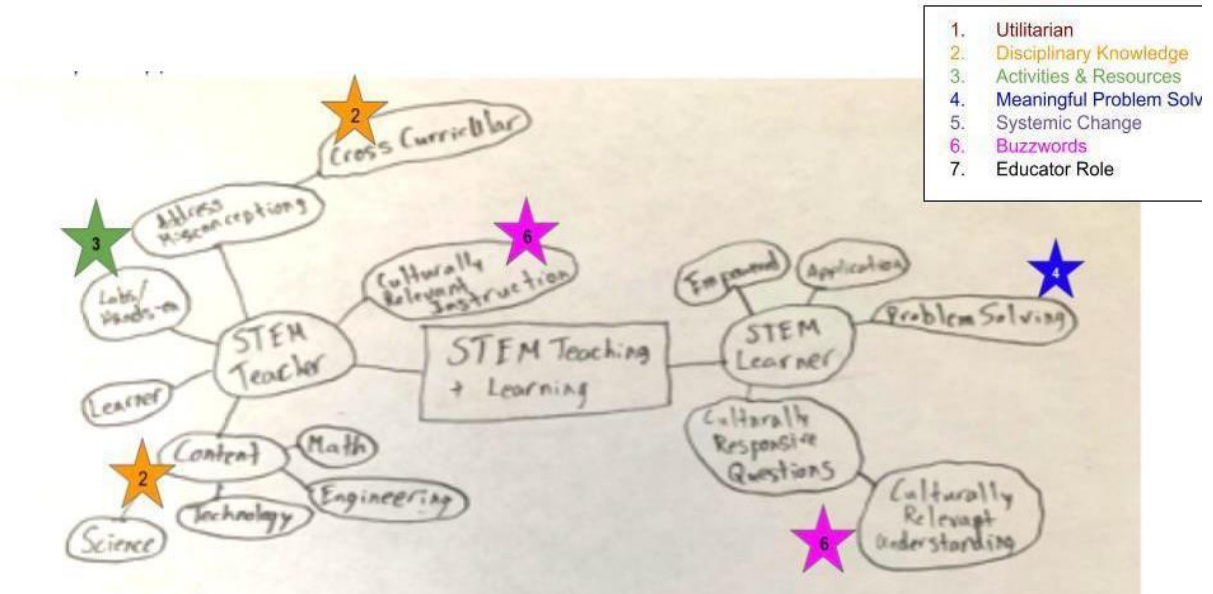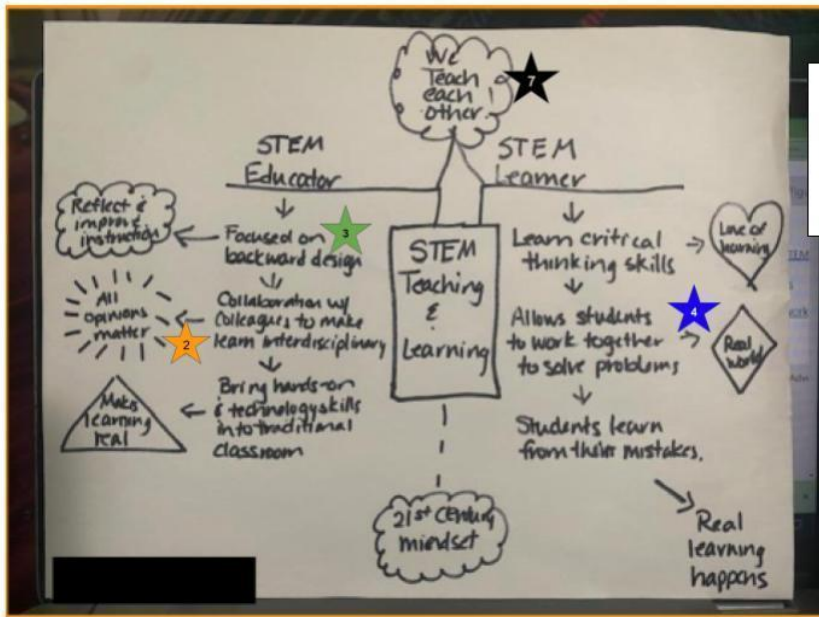
Educator 5's Concept Map

Figure 6

Educator 6's Concept Map

Alternative Teacher Certification Programs: Post Covid-19 Pandemic - Do Graduates Feel Prepared to Teach in Virginia?

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Abstract

The Commonwealth of Virginia has seen an increase in the number of educators completing Alternative Teacher Certification Programs, contributing to the diversity in the teaching work force. The purpose of this study was to identify the perceptions of alternatively certified public K-12 teachers regarding their preparedness to teach. The researcher employed a semi-structured focus group protocol in conducting four focus groups with 23 participants who were provisionally licensed K-12 public school teachers in one school division in Virginia and represented elementary, middle, and high school teachers in both general and special education roles. Findings indicated that beginning teachers who have completed an alternative teacher certification program (ATCP) do not feel prepared for the teaching role. Additionally, study findings indicate that ATCP teachers perceive that their training did not adequately prepare them for core academic instruction, lesson planning, differentiation, classroom management, and working with parents, resulting in high levels of stress among provisionally licensed teachers. School leaders are tasked with ensuring equitable learning experiences for all students represented by a highly qualified, diverse faculty. Understanding the unique pre-service training and ongoing needs will help school leaders provide supports aimed at increasing their retention to address growing teacher shortages.

Keywords: alternative teacher certification, covid-19 pandemic, teacher preparation

Shortages of qualified teachers in the United States have been growing since the 1980's and were compounded by the recent Covid-19 pandemic (Rose & Sughrue, 2020; United States Department of Education, 2022). Just one decade ago, the National Center for Education Statistics (2013) reported that the annual average nationwide attrition rate of teachers was 16%. Less than 10 years later, in March 2022, more than 55% of teachers reported that they were

considering leaving the profession prematurely (National Center for Education Statistics, 2022). In June 2022, the U. S. Bureau of Labor Statistics identified a 3% reduction in the overall teaching force in just over two years from 2020 to 2022; this 3% loss represents more than 300,000 teachers nationally. Teachers who resigned during this period cited understaffed schools and the Covid-19 pandemic as the reasons they left (Dill, 2022). These data represent alarming figures of teachers who are exiting the profession prematurely and not returning, resulting in critical teacher shortages.

In 2022, over 60% of schools reported increased numbers of teacher vacancies as a result of the Covid-19 pandemic (United States Department of Education, 2023). Teacher shortages are expected to continue to grow and the number of alternative teacher certification programs, or ATCPs, are also growing to address the continuing teacher shortage (Coleman et al., 2020; Sutcher et al., 2019; Wilhelm et al., 2021). As a result, the number of beginning teachers produced by ATCPs is increasing and school divisions have become reliant on these programs to fill teacher vacancies (Wilhelm et al., 2021).

The purpose of this study was to identify the perceptions of alternatively certified public K-12 teachers regarding their preparedness to teach in Virginia. According to the Joint Legislative Audit and Review Committee (2023), at the start of the 2023-2024 school year, 4.5 percent of teaching positions were vacant; this is a 3.9 percent increase from the prior school year. In addition, the Virginia Department of Education (VDOE) reported that during the 2019-2020 school year, 7.7% of Virginia teachers were provisionally licensed statewide. Schools in high-poverty areas had an even larger percentage of provisionally licensed teachers (10.4%). For example, the percentage of provisionally licensed teachers in the Southeastern, Central, Northern

and Shenandoah Valley regions of Virginia ranged from 5% - 11%; and specifically in Title 1 schools the averages ranged from 2% - 12% accordingly.

Alternative Teacher Certification Programs contribute to the diversity of teachers represented in the teaching work force. Aligning with principles of social justice through advocacy, school leaders are tasked with ensuring equitable learning experiences for all students represented by a highly qualified, diverse faculty (Gershenson et al., 2021). Henry et al. found that alternative pathways to teaching increase diversity in the teaching force (2014). In fact, males and teachers of color are more likely to train in an alternative teacher certification program (Van Overschelde & Wiggins, 2020). Moreover, students in low socio-economic schools, receiving special education services, living in rural or urban areas, and students of color are more likely to have teachers trained in an ATCP (Whitford et al., 2018). School leaders have an important role in creating staff buy-in for racial equity and developing division policies to support racial equity in schools while also promoting student achievement. Critics argue that placing alternatively certified teachers who may lack training or clinical experience with the neediest students will lead to decreased academic achievement (Whitford et al., 2018). As the numbers of ATCPs continues to grow and these programs supply more teachers into the workforce, it is important to identify the perceived levels of preparedness of these teachers to teach as a result of their pre-service training.

Literature Review

Teacher shortages were growing prior to the start of the Covid-19 pandemic and have continued in its aftermath. The perceived low status of teachers deters the highest-performing college students from pursuing education as a career (Garcia & Weiss, 2019; Maier, 2012). Additionally, Carver-Thomas and Darling-Hammond (2019) have reported data that indicate low

teacher salaries, limited resources, high student-teacher ratios, inadequate working conditions, high levels of stress, and the challenges of meeting the diverse needs of students and families as some of the reasons teachers in school divisions that serve low-income students leave the profession prematurely. Teachers themselves report that they leave the profession due to a lack of administrative support, demanding workload, limited opportunities for collaboration, and difficulty motivating and managing students (Carver-Thomas & Darling-Hammond, 2019; Schonfeld & Feinman, 2012). These issues have contributed to nationwide teacher shortages, particularly in high-needs schools. According to Van Overschelde and Wiggins (2020), the need for teachers will surpass the availability of licensed teachers and this gap is predicted to continue to grow through 2025.

According to Carver-Thomas and Darling-Hammond (2019), "Teachers of color are also more likely to enter teaching through an alternative pathway" (p. 11). According to Miller (2018), in Virginia from 2008-2018, 30% of teachers hired were of color but their retention rates varied. This is evidenced by 67% of Virginia's Hispanic and Black teachers remaining in the classroom in comparison to 73% of White teachers. Carver-Thomas and Darling-Hammond (2019) stated "teachers at schools with the greatest proportion of students of color move schools or leave teaching at a rate 46% higher than teachers in schools with the fewest students of color" (p. 10). According to Miller (2018), "Recruiting teachers of color through the provisional licensure process may exacerbate disparities by yielding greater attrition rates" (n.p.) as indicated by 18% of provisionally licensed teachers leaving the profession by their third year of teaching compared to 11% for educators from traditional certification programs. Hence, there is a need to investigate the perceptions of alternatively certified public K-12 teachers regarding their preparedness to teach in Virginia.

In order to understand the teachers that ATCPs produce, one must first examine the programs themselves to understand the unique training and experiences of these candidates. There are few consistent program requirements among ATCPs (Bowling & Ball, 2018). The key difference between ATCPs and traditional teacher preparation programs (TTPs) is the amount of pedagogical training a candidate receives prior to beginning a career as a classroom teacher (Schonfeld & Feinman, 2012). ATCPs often require teachers to take education courses while simultaneously acting as the teacher of record in a classroom. This means that they have received less training in pedagogy before they begin teaching than their counterparts who receive undergraduate training in education (Wilhelm et al., 2021; Yin & Partelow, 2020). Many ATCP teachers have not experienced clinical training at all, such as student teaching or classroom observations, prior to beginning teaching (Consuegra et al, 2014). There is great variation in the candidate selection, level of rigor, and preparation for preservice teachers provided by ATCPs (Bowling & Ball, 2018). Currently, there are over 130 different types of ATCPs in the United States (Bowling & Ball, 2018). ATCPs may be affiliated with local universities or school divisions in order to produce teaching candidates in a specific geographic area. ATCPs have also been developed to attract career switchers or former military service members, such as Troops to Teachers. Some programs, such as Teach for America, provide teacher candidates to schools all over the United States (Redding & Smith, 2016; Van Overschelde & Wiggins, 2020; Virginia Department of Education, 2022). Despite the great diversity in their programs, ATCPs provide candidates without an undergraduate degree in education an expedited pathway to teacher certification that does not require an additional bachelor's degree in education (Redding & Smith, 2016; Yin & Partelow, 2020).

Conceptual Framework

The review of literature revealed several themes surrounding alternative teacher certification programs (ATCPs). These themes included: (a) an increase in ATCPs to address teacher vacancies (b) positive outcomes for students as a result of ATCPs (c) possible negative outcomes for students as a result of ATCPs and (d) the need to address the specific needs of ATCP teachers to increase their retention. The researcher created this conceptual framework based on a systematic review of the literature that investigated the ongoing teacher shortage and programs that may reduce the number of teacher vacancies. The review of literature included peer-reviewed journal articles (primarily published between 2011-2023), scholarly book publications, state and federal government resources, university websites, and other statistical databases. A literature review log was maintained with key words, authors, findings, implications, etc. to ensure accurate record keeping. This extensive literature review included comparing elements of TTPs including training and coursework, practicum experiences, and the duration of programs to ATCPs that are being developed to address growing teacher vacancies. Research on the perceived advantages and limitations of traditional and alternative certification programs were included. In addition, literature related to administrative support and resources were reviewed to explore how to assist teachers from ATCPs to be successful and remain in the classroom.

Figure 1

Conceptual Framework for Alternative Teacher Certification Programs
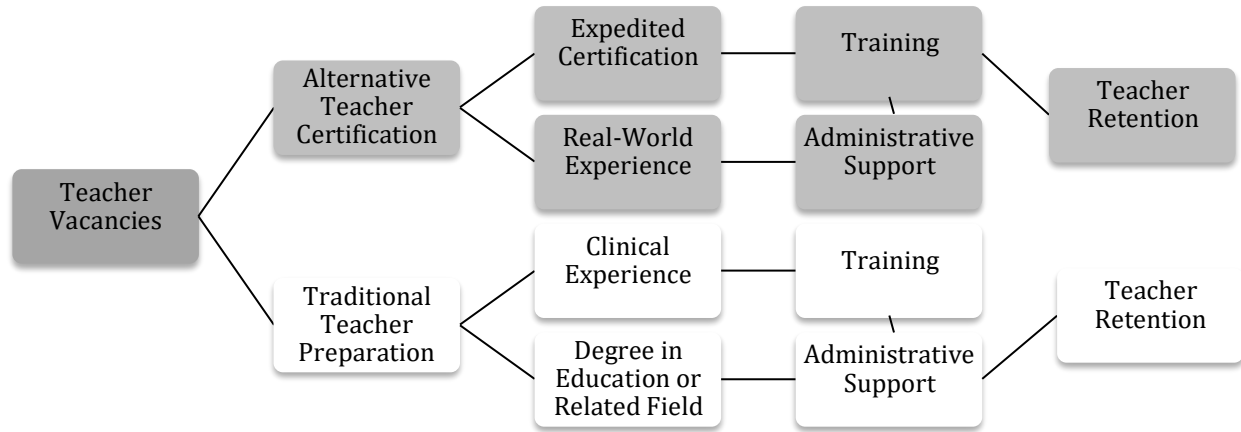
This conceptual framework provides a broad context for this study and relates it to emergent themes regarding ATCPs and growing teacher vacancies. As Figure 1 illustrates, most beginning teachers complete an ATCP or TTP. This study examined only those teachers who completed an ATCP, illustrated by the shaded section of the figure. The review of literature demonstrated that teachers who complete ATCPs have less pedagogical training, education coursework, and/or clinical experience than their TTP counterparts (Consuegra et al., 2014). The purpose of this study was to identify the perceptions of alternatively certified public K-12 teachers regarding their preparedness to teach. Understanding their unique pre-service training and ongoing needs will help school leaders provide supports aimed at increasing their retention to address growing teacher shortages.

Method

This basic qualitative study focused on the perceptions of alternatively certified teachers currently teaching in Virginia K-12 public schools regarding their preparedness to teach. Characteristics of qualitative research include individuals constructing their own reality based on

their lived experiences and social interactions. According to Merriam & Tisdell (2016), "Constructivism thus underlies what we are calling a basic qualitative study" (p.24). This study utilizes a phenomenological approach in order to explore how participants build meaning from their lived experiences (Patton, 2002). Through in-depth interviews, the researcher gathered data from those who directly experienced the phenomenon. The interview protocol will afford participants the opportunity to describe and share personal accounts, feelings, and help them make sense of their experiences (Patton, 2002).

Based on Virginia Code 8VAC20-23-50, provisionally licensed teachers in public K-12 schools in Virginia may be granted provisional teaching licenses for no more than three years for teachers who have acceptable deficiencies in their teaching licensure, including a lack of clinical field experience or pedagogical training, that can be the result of completing an ATCP (Wilhelm et al., 2021). Hence, provisionally licensed teachers were selected for this study as they are likely enrolled in an ATCP to earn full state teacher licensure while they teach. A focus group protocol was developed by the researcher and vetted by a team of university faculty and educational leadership doctoral candidates that are also experienced school administrators (to ensure the instrument's validity and reliability).

The sample population was identified from one school division using lists of teachers who were teaching with a state-issued provisional teaching license. A single-stage sampling procedure, composed of direct initial contact with potential candidates, occurred (Creswell & Poth, 2018). Direct contact was made via email based on a current list of provisionally licensed teachers provided by the human resources departments of the school division. Teachers meeting the criteria for the study were invited to participate in a focus group. Of the over 200 eligible study candidates identified, 23 participated in the study via the Zoom video-conferencing

platform. Field notes were created during the interviews to record nuances that may not be captured on the audio recording such body language, voice inflections, and non-verbal emotional responses. While data on participant race and ethnicity was not specifically collected for this study, study participants included Black, White, and Latinx teachers. Additionally, study participants ranged in age and represented candidates from several different generations. Table one describes the candidates who participated in the focus groups for this study.

Table 1

Focus Group Participant Information Relating to Gender and School Level/Role

Participant Gender	Pre-school	Elementary School	Middle School	High School	Special Education	Counselor	Total
Male	0	1	0	3	2	0	4
Female	1	6	5	7	5	2	19

Data Analysis

Transcriptions of the focus group conversations, supported by extensive field notes taken by the researcher during the interviews, were examined and coded using Creswell and Poth's (2018) Data Analysis Spiral. The process began by managing and organizing these data. The focus group recordings were then transcribed and reviewed for accuracy by the researcher. Next, an initial review of the data was completed to identify patterns of responses and emerging themes. The researcher used Erickson's (1986) interpretative method of data analysis to categorize themes and assertions after reading the transcripts at least six times to establish familiarity and develop a deep understanding of the transcripts' content. Themes emerged from

multi-leveled in-depth analysis of the transcribed data. Preliminary themes were identified

through coding analysis and then themes were collapsed based on similarity of responses and

validated through repeatedly confirming or disconfirming evidence from the data corpus

(Erickson, 1986). Theme frequencies were also recorded as part of coding process. Some of

these themes from the coding patterns included levels of preparedness to teach (including

specific content areas), prepare lesson plans, create and analyze assessments, differentiate

instruction, manage the classroom, work with diverse student groups, and work with students'

families. The researcher used transcript data to paraphrase or directly quote the perceptions of

study participants. Narrative vignettes were also used when participants shared a story to further

illustrate a perception. Not all participants responded to all questions, hence the total number of

responses varied per question.

Findings

The interview data were coded and organized into thematic findings. These thematic

findings are supported by both narrative descriptions of participant experiences and detailed

vignettes that expand on these points.

Perceived Level of Preparedness for Teaching

The first thematic finding suggests alternatively certified teachers perceived they were

somewhat or not at all prepared to teach based on their training. According to the data, 81% of

respondents indicated they felt only somewhat or not at all prepared to teach based on their

training. Alternatively certified teachers perceive that classroom management, academic

instruction, lesson planning, and meeting the needs of diverse learners are the areas in which

they were most unprepared. Nearly half of total respondents, 48%, stated that they did not feel

prepared to begin their teaching role. Study participants offered several reasons why they felt

unprepared to teach. Four study participants cited a lack of school-based support, three participants stated they did not understand the education jargon used by their colleagues, and one study participant responded simply that their ATCP did not help them feel prepared to teach. One participant said, "I really am very disappointed about paying a whole lot of money and taking expensive classes and feeling like it really doesn't prepare you at all". Another participant expressed that their training should have been more rigorous in order to adequately prepare them for teaching. They said, "I wish that the courses that I took had made me do more, made me figure through it, made me understand the SOLs better." Several study participants reported feeling stressed or overwhelmed when they began teaching. In fact, in the four focus group transcripts, the word "overwhelmed" occurred nine times and variations of the word "stress" occurred 14 times. Many study participants stated that the most effective training was "on the job" training.

In addition, participants indicated that there were specific teacher roles and responsibilities for which they were unprepared. The seven areas included: working with special education students, teaching reading, classroom management, student testing requirements, working with parents, the multitude of roles required of teachers, and using the technology required in the school division. One participant stated:

> I think because there's so much flying at you your first year, there's things I want to do and I learned through my training that I would like to implement, but I just don't have the time or mental capacity to do that.

In addition, both special educators and general educators reported facing challenges in navigating various aspects of special education, including students with behavioral challenges.

Study participants discussed the challenges of understanding the many responsibilities that teachers are expected to manage, compounded by a lack of support and staff shortages. For example, participants indicated the difficulty balancing the many tasks that teaching requires while also completing their coursework for teacher licensure. In addition, one participant discussed how the constantly increasing number of professional responsibilities is negatively affecting all educators, not just beginning teachers:

It is not only new teachers though. We are so understaffed in the schools that you're being asked to take on multitudes of roles that teachers never had to deal with before and I understand … why teachers are leaving because it's no longer just about teaching. … You've got to be a counselor, you got to be a security guard, you got to, it's everything and frankly it doesn't pay that well to be doing all of that.

While some study participants reported feeling prepared for their teaching position, they also expressed having difficulty putting what they learned into practice in their classroom. Several participants also indicated that they had experience serving as an instructional assistant which prepared them for the teaching role. Table two presents the data for perceived levels of preparedness as indicated by provisional teachers.

Table 2

Level of Preparedness as Indicated by Provisional Teachers

Participant responses	Frequency	Percentage
Very well prepared	4	19%
Somewhat prepared	7	33%
Not at all prepared	10	48%
Total responses to question	21	100%

Perceived Areas of Least Preparedness

The second thematic finding suggests alternatively certified teachers perceived they were most unprepared for teaching core academics, lesson planning, and working with diverse learners, including English Language Learners and students with disabilities. According to the data, the three categories indicating the highest level of unpreparedness were: teaching core academics (86%), lesson planning (75%), and working with (ELL and SPED) diverse learners (55%). Data revealed a level of unpreparedness with the knowledge and skills to teach the core academic content. For example, one participant said, "The small reading groups in kindergarten, that's something that no one prepared me for in college." Another participant noted the lack of a curriculum as problematic:

We don't really have any kind of written curriculum as far as how it's supposed to play out. We have the standards of learning; we don't have any sort of curriculum to follow. It's kind of make it up as you go.

Another participant said, "So, I teach Spanish. I think that I didn't necessarily get a whole lot of preparation to teach specifically my content."

The second major category of unpreparedness for participants (75%) was in lesson planning. Many stated that there was a vast difference between what their training taught them to do and the expectations that they received from their individual schools. One participant stated,

I'm going to say no because everything that I've learned thus far in my master's program I am having to come into the classroom and learn my own lesson plans, learn how to differentiate lessons for students, behavior management. And we do talk about some of those things, but it has not trained me or prepared me in my coursework for that in the classroom.

Several respondents noted that although their preservice preparation for academic instruction and lesson planning was inadequate, the school-based support they received through their Professional Learning Communities (PLC) was helpful.

A third major category of unpreparedness for participants was (55%) in working with diverse learners (ELL and SPED). Many of these responses involved feeling unprepared to support students with disabilities specifically. A participant said, "I would say not at all. Special education is a very unique area and I don't think it was touched upon in the light that might be needed." Both special educators and general educators reported facing challenges in navigating various aspects of special education, including students with behavioral challenges. One participant summarized the preparation in special education for provisional teachers and the teacher shortage this way:

In college you take one class and you're hired as a provisional teacher…. you have the legal aspects of special education and that's it. I've never done any student teaching and I

was thrown into a self-contained classroom in middle school for two years. … it's … not

any fault of the school.

Table three presents the data for teachers' perceived level of preparedness in aspects of academic

instruction, planning, and delivery.

Table 3

Level of Preparedness in Aspects of Academic Instruction, Planning, and Delivery

Participant responses	Well-prepared	Percentage	Unprepared	Percentage
Academic instruction	1	14%	6	86%
Lesson planning	2	25%	6	75%
Creating & analyzing assessments	4	80%	1	20%
Meeting the needs of diverse learners (SPED and ELL)	5	45%	6	55%
Developing engaging lessons	7	70%	3	30%

*Not all participants responded to each question. The percentage was derived from the number of participants indicating that response.

Perceived Level of Preparedness to Manage Student Behavior

The third thematic finding suggests alternatively certified teachers perceived they were

unprepared to manage student behavior. According to the data, 87% of respondents said they

were not prepared to manage student behavior. Participants cited the complex nature of students'

behavior pre- and post-pandemic, as well as working with students with special needs, as reasons they did not feel prepared to handle the emotional challenges in their classroom. Many survey respondents cited student behavior as a significant daily challenge that contributes to their overall feeling of being overwhelmed. They reported that the classes they took did not adequately prepare them for the challenging behaviors they encountered in the classroom. One participant who is a guidance counselor stated, "Looking at mental health, we're having to do interventions that are on the level of way beyond what I am trained to do… self-harm interventions, the suicide risk interventions, and things like that."

Study participants stated there was a disconnect between the strategies they were taught and what actually works in the classroom. They also noted that extreme behaviors frequently occurred that they were not prepared to manage. One participant stated that the ATCP curriculum did not help them to manage student behaviors but real-world advice from their professor was very helpful:

Here's how you really handle this situation. And that college professor that came in, she was the first person who really gave it to me straight. Like, okay, yeah, this is an issue. Here's how you handle it. And it worked. All of her advice worked.

Table four presents the data for teachers' perceived level of preparedness to manage student behavior.

Table 4

Level of Preparedness to Manage Student Behavior

Participant responses	Frequency	Percentage
Prepared to manage student behavior	2	13%
Not prepared to manage student behavior	13	87%
Total responses to question	15	100%

*Not all participants responded to each question. The percentage was derived from the number of participants indicating that response.

Perceived Level of Preparedness to Work with Parents

The fourth thematic finding suggests alternatively certified teachers perceived they were unprepared to work with parents. According to the data, 75% of respondents said their training did not prepare them for working with parents. Even though it is critically important to partner with students' families to support academic achievement and a child's overall wellness, there is little coursework and few field experiences teaching preservice teachers how to best engage families (Epstein et al., 2019; Epstein & Sheldon, 2023). While some recalled receiving training in other areas, such as classroom management, several study respondents stated that they simply did not receive any training in this area. One study participant stated, "I can't remember anything covering it in any of the courses." Three study participants, or 25% of respondents, stated that they did feel prepared to work with parents but not a result of their training. These teachers reported that it was not their ATCP training, but their own role as a parent, their previous career in mental health, or prior professional experience helped them be prepared to work with parents

in their role as a teacher. Table five represents the data for teachers' perceived level of

preparedness to work with parents.

Table 5

Level of Preparedness to Work with Parents

Participant	Frequency	Percentage
Well Prepared	3	25%
Not Prepared	9	75%
Total Responses to question	12	100%

*Not all participants responded to each question. The percentage was derived from the number of participants indicating that response.

Discussion

As teacher shortages continue to grow as a result of numerous factors including low pay,

limited administrative support, and the results of the Covid-19 pandemic, alternative teacher

certification programs (ATCPs) are growing in number to produce candidates that can fill

teacher vacancies. As a result of their limited clinical and pedagogical training, ATCP teachers

have unique needs for ongoing support and training. Many of these teachers report feeling

overwhelmed and unprepared to teach.

The findings from this research study align and expand upon current literature in the

field. Multiple study participants stated that the most effective training was "on the job" training.

This aligns with previous research on ATCPs and teacher preparation. Consuegra et al. (2014)

report that many ATCPs are designed for participants to learn how to teach while teaching. The

findings of this study also confirm the findings of previous researchers who report that ATCP

teachers have difficulty with classroom management and a limited understanding of pedagogy

(Linek et al., 2012). Shuls and Ritter (2013) also noted that content knowledge and limited

hands-on training in ATCPs do not adequately prepare teachers.

As more teachers receive their training in ATCPs, some opponents of alternative teacher

certification programs argue that unlike traditionally prepared teachers, teachers who complete

ATCPs have difficulty with classroom management, a limited understanding of pedagogy, and

struggle to complete the daily responsibilities of a teacher (Linek et al., 2012). Research finds

that teachers who complete ATCPs often have difficulty with classroom management (Linek et

al., 2012). Additionally, researchers assert that content knowledge and a brief summer training

experience do not adequately prepare individuals for the complexities of teaching (Shuls &

Ritter, 2013). In some ATCPs, the students have limited or nonexistent foundational classes and

limited student teaching experiences before they become a teacher of record (Foote et al., 2011).

There is also a growing awareness of the importance of family-school partnerships,

however, required coursework on family and community engagement is limited (Epstein et al.,

2019; Epstein & Sheldon, 2023). Many preservice teachers are taking a variety of core content

courses in their teacher preparation programs with little to no coursework or field experiences

working with families (Epstein & Sheldon, 2023; Patten, 2011).

In order to support and retain ATCP teachers, leaders at the school level and division

leaders should provide specific, individualized support for these teachers based on their unique

needs and perceived deficits in order to build their self-efficacy and promote their retention.

School leaders should provide professional development, as well as coaching and mentoring,

designed to support them in areas including core content instruction, lesson planning, and

differentiation for ELLs and students with special needs. Additional professional learning

opportunities are needed to help develop a stronger skillset in classroom management, behavior

management, and working with parents. It would also be advantageous to implement mentoring

programs for new teachers to help them manage the complex roles and responsibilities required

of new teachers. Understanding their unique pre-service training and on-going needs will help

school leaders provide supports aimed at increasing the retention of these teachers to address

growing teacher shortages.

Implications

School leaders should understand the unique pre-service training that ATCP teachers

receive in order to effectively support alternatively certified teachers who may have limited

training and/or clinical experience. ATCPs contribute to the diversity of teachers in education

which aligns with principles of social justice for equity and representation. Based on the findings

of this study, there are two primary implications from this study.

The first implication is school administrators and division leaders should increase

professional development and clinical training to support ATCP teachers. Study participants

reported feeling unprepared to teach and felt unprepared for certain aspects of the teaching role,

including core content instruction, lesson planning, and differentiation for ELLs and students

with special needs. Training should include hands-on components as many study participants

reported that "on the job" training is the best way to learn how to teach.

The second implication is school administrators and division leaders should survey

ATCP teachers in their buildings and provide extensive mentoring and support to address the

needs of this unique group of educators. Study participants expressed a need for individualized

support in order to address specific aspects of teaching in which they feel unprepared. These

include classroom management, working with parents, managing the responsibilities of teaching, and meeting the needs of diverse learners, including ELLs and students with disabilities.

Limitations

There were several limitations in this study. This research was limited to one large school division in Southeastern Virginia. Second, of the 23 participants, only four were male. Additionally, there is great variation in the support provided for teachers at the individual school level, leading to disparities in support within the school division that study participants may not have realized. Finally, beginning teachers may not have fully understood what they need in order to be successful or may not have fully understood the roles of leaders at various levels.

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