

## **Teacher Shortage**

In December of 2022, Kentucky had 104 job postings for teacher vacancies ranging from PK-12th grade, according to the Kentucky Educator Placement Service (KDE, 2022). Teacher shortage is not a new phenomenon in education. In the beginning of the common school, challenges to find and retain quality educators were pervasive (Hofstadter, 1963). According to recent research (Nguyen et al., 2022), the United States had 36,000 vacant positions in the education field and at least 163,000 underqualified teachers. When compared globally, US teachers experience higher turnover rates than peers in other countries and when compared to other professional fields, educators experience a much higher percentage of attrition (Garcia et al., 2022).

The teacher shortage is a result of the lack of new qualified candidates and the teachers' inclination to quit their jobs (Edweek, 2022). Factors that attribute to teacher shortages are multifaceted, making it difficult when trying to improve outcomes. Student population growth and a decline in the number of teachers, the lack of teacher voice, a non-supportive work environment, increasing school problems, teacher morale, and teacher base salary are just some of the potential factors that can impact the number of new qualified candidates and teacher retention (Garcia et al., 2022). A report by the Learning Policy Institute (LPI) titled, "A State-by-State Analysis of the Factors Influencing Teacher Supply, Demand, and Equity" provided a rating for each state on various indicators relating to teaching attractiveness and teacher equity. When comparing Kentucky to the national average, areas such as collegiality within the school, administrative support, teacher plans to leave teaching, and the percentage of uncertified teachers in both low-minority and high-minority schools were reported as more favorable. However, indicators such as starting salary and wage competitiveness were slightly less favorable than the national average (Learning Policy, 2018). This less than optimal rating for starting salary and wage competitiveness might be a factor which contributes to the teacher shortage in the Commonwealth. According to research, teacher base salary and lack of compensation for years of experience are negatively associated with teacher attrition (Garcia et al., 2022).

In a letter addressed to his colleagues on October 10, 2022, Jason Glass, Commissioner of Education for Kentucky, sent a positive message about raising awareness of the teacher shortage issue. He stated, "Opportunities are opening up for education in Kentucky. While we continue to have our challenges, there is a lot of momentum moving in a positive direction." This article will explore current strategies the Commonwealth of Kentucky utilizes and strategies other states have used to combat teacher shortages.

### **Strategy: Alternative Routes to Teacher Licensure**

Such opportunities to "open up" education entail additional certification routes. For educational leaders these alternative options appear to remove friction points such as: non-certification, financial strain and a lack of time. These friction points might keep capable candidates from

entering the profession. In addition, these alternative routes might provide a wider “net” to select teacher candidates. According to the *Kentucky School Report Card* (2023), 7% of educators had emergency or provisional certification. Kentucky has nine options for alternative routes to teaching certification. The newest option presented to help districts with staffing is Option 9- Expedited Route, which is the only option available for individuals without a bachelor's degree.

The Education Professional Standards Board (EPSB) details nine alternative options for certification in the Commonwealth. See Appendix A for a description of certification routes and requirements that districts and candidates must follow in order to employ an educator with an alternative certification. In addition, there are four certification routes EPSB recognizes for individuals educated in an education preparation program: (a) those educated in Kentucky, (b) those educated out of Kentucky, (c) those educated outside of the United States, and (d) those educated through an out of state online program (EPSB, 2023).

Each alternative route has specific candidate requirements, some are more complex than others. While the purpose of alternative certifications is to “open-up” teacher candidates, the requirements posed by each route “close” the option for certain individuals, narrowing the pool of potential candidates. In review of the options, while they certainly provide a different route to educator certification, the impact might be less than optimal. Appendix A, highlights the specificity for each route and showcases the limited nature that some of these options provide for school districts and potential teacher candidates.

Other states have “opened up opportunities” in their quest to alleviate teacher shortages. The national enrollment trends for Colleges of Education have declined amidst an increase in teachers leaving the profession. For example, in Oklahoma the state board of education decided to lower the standards for teachers significantly by increasing emergency certifications from 32 certifications in 2011-2012 school year to 3,000 in 2018-2019 school year. However, this response by Oklahoma’s state board of education to solve a long-standing issue with teacher shortage came up short. Oklahoma continued to see teachers leave the profession, citing pay, respect and political climate as major factors according to research results from Theresa Cullens (Palmer, 2018).

### **Strategy: Alternative Teacher Education Programs**

States such as Nevada, Florida, Alabama, Arizona, Indiana, Michigan, North Carolina, South Carolina and Texas have turned to private teacher education programs that require less time and money to educate individuals to fill vacant positions (Baumhardt et. al, 2021). Teachers of Tomorrow, one of the largest accredited (AAQEP) for-profit education programs available in the nine states listed, has certified more than 70,000 teachers nationwide. The lure of such a program can be attributed to the relative ease (flexible online coursework) and low cost for an individual (Teachers of Tomorrow, 2023). Texas Teachers of Tomorrow produced slightly over 15,000 of the new teachers hired in Texas in 2017, the most by far in the state. This program produced almost 12,000 more candidates than the next largest teacher preparation program, which happened to be another alternative certification program (Baumhardt et. al, 2021).

Not only are these alternative teaching programs providing more teacher candidates but according to the Teachers of Tomorrow website (2023), some of the benefits of their alternative route to teaching certification include the following:

- Lower cost and quicker completion time compared to traditional teacher preparation programs
- Flexible online coursework that allows individuals to continue working while completing their certification
- High-quality education that is accredited by the Association for Advancing Quality in Educator Preparation (AAQEP)
- Support from experienced educators throughout the certification process and into the first year of teaching
- Opportunities for career advancement and leadership roles in education

Baumhardt et al. (2021), note that alternative routes to teaching can provide a more diverse pool of teachers, particularly in terms of race and ethnicity, as well as provide more candidates to help alleviate teacher shortages in certain areas. However, they caution that retention rates for teachers who enter the profession through alternative pathways tend to be lower compared to those who complete traditional teacher preparation programs. This is highlighted when examining Teach for America (TFA) teacher retention rates. Initially teachers who enter the education profession through this route tended to stay in the classroom at a much higher rate than the university-educated teacher; however by the end of the second year, the retention rate of a university-educated teacher far surpasses that of a TFA teacher (Cochran-Smith, 2010).

In Texas, teachers educated through alternative programs were more likely to leave the profession after their first year. According to a four-part podcast aired on APM reports in August of 2021, one indicator of new teacher turnover is the amount of pre-service teaching and education experience individuals had prior to running a class on their own (Baumhardt, 2021). In comparison, according to the Kentucky Department of Education (2022) “Educator preparation institutions are required to provide a full professional semester of student teaching, at least 70 full days (or equivalent) in an instructional setting that corresponds to the grade levels and content areas of student teacher’s certification program.” In addition, *Student Teaching - Kentucky Department of Education* (2022) states that prior to a pre-service teacher entering the student teaching program, the candidate has to complete a minimum of 200 clock hours of field experience in various school settings per 16 KAR 5:40 (KDE, 2022).

### **Strategy: Policy Reform**

Educational leaders need to look beyond alternative certification routes and examine other strategies. Reforming policies like 16 KAR 5:040 in order to increase the attractiveness for teachers from diverse backgrounds and retain teachers once employed in school districts is essential. Currently in Kentucky, student teachers are not able to (a) receive direct compensation for student teaching or (b) have responsibility for supervising P-12 students without direct supervision according to 16 KAR 5:040.

Many school districts in the Commonwealth are eager to hire a diverse teaching force as their population grows increasingly diverse. According to the Kentucky Department of Education (KDE) 2022 School Report Card (SRC), 59.9% of students are economically disadvantaged and 26.5% are minority races in contrast to Kentucky educators who are 94.9% white (KDE, 2023). Exploring possible friction points that are keeping students from economically disadvantaged or minority backgrounds from pursuing or completing educational programs is important to consider as student populations change. Most Colleges of Education offer opportunities for field placement throughout the pre-service program and all require student teaching placements of either a full or half year during the final semester or year of the program.

For students who come from economically disadvantaged backgrounds this placement can present an unnecessary hardship. Many professional fields require internships that often have the added benefit of receiving financial support from the employer. This is not the case for student teachers in Kentucky. A student teacher has to forgo payment for their services which consists of running a classroom full-time and participating in the specific needs of the school, oftentimes requiring attendance at after-school functions. While it is not impossible, it is very challenging for a student teacher to also sustain employment elsewhere during this period.

For districts to consider paying student teachers, there needs to be additional benefits for the district. Educational leaders widely understand the benefit, responsibility, and need to host student teachers in their district/schools. Student teaching is a unique time in a teacher's development as they are experiencing a classroom for the first time as the lead instructor with support and supervision by a master teacher and university faculty member. A district's flexibility to allow these student teachers, especially those who are in year long placements, the opportunity to teach on their own for part of the day would help curtail the strain caused by a teacher shortage and also allow for schools to create more flexibility in their schedule.

Some might argue that teachers are not equipped at this junction in their development to be left alone with students unsupervised. However, in the Commonwealth of Kentucky, an emergency substitute is only required to have a minimum of 64 credit hours (junior status for most undergraduate programs) and is able to lead a classroom and receive compensation (KDE, 2022). The barriers that are created by policy 16 KAR 5:040 and other policies like it need to be reconsidered to help promote the profession and diversify the candidate pool. In addition, improvements in policies would lend itself to improved learning outcomes for student teachers.

In some ways allowing student teachers access to a hybrid of traditional student teaching (directly supervised instruction) and independent classroom instruction might provide a more realistic learning experience and support the student teacher as they transition into the field. In 2022, the U.S. Department of Education announced partnerships with states, school districts, and Colleges of Education to address the teacher shortage. One institution that met the call was Dallas College in Texas. This institution launched an apprenticeship program to address the need for a high-quality teacher talent pipeline with a goal to serve 200 future educators in partnering school districts across Dallas County (Lyda, 2022).

In collaboration with two local school districts, Dallas College developed a model that provides student teachers with real-world experience, the ability to earn a salary, and a degree or credentials. Students who are currently enrolled in the Dallas College's B.S in the teacher education program are placed in collaborating schools. These students will earn \$30,000 each for a year-long residency, serve three days a week in classrooms, serve as a tutor or substitute one day a week and receive in depth coaching from faculty during weekly cohort meetings (Lyda, 2022).

Nebraska State Senator Lynne Walz proposal to reduce financial strain for student teachers should also be considered. This proposal, LB519, established methods to remove financial barriers that kept qualified people from becoming teachers and staying in the profession. Under this bill, eligible students could apply annually for a loan forgiveness program, fees for certain teaching certificates would be eliminated, and it would require the state department of education to provide retention payments to public and private school teachers and staff (Walz, 2023).

### **Strategy: Building a Diverse Pipeline**

Teacher retention is influenced by experience. Therefore, educational leaders must focus on strengthening field experience and induction programs, while encouraging more collaboration with school districts, teacher preparation programs and state educational agencies. Educational leaders should explore ways to promote and increase student teaching experiences. Ronfeldt (2013) cites a 2009 study by Boyd et al., that found New York City teachers were more effective at raising student achievement when their teacher preparation programs had more oversight of student teaching experiences. Furthermore, Goldhaber et al. (2017), using data from six teacher preparation programs in Washington State, found that teachers were more effective when their student teaching experiences aligned with the demographics of the respective schools.

### ***Collaboration to Combat Teacher Shortages***

Dr. Cheryl Logan, former superintendent of Omaha Public Schools, and the University of Nebraska at Omaha (UNO) have collaborated to address the teacher shortage issue by developing a robust teacher pipeline through a \$14.8 million grant. This partnership aimed to combine the accessibility of an alternative route with the richness of a university-educated teaching experience. The plan had four components: teacher advancement, teacher acceleration, teacher scholarship, and a specific teacher academy for secondary education to increase teachers in high-demand areas (Bartling, 2022).

The Teacher Scholars Academy was a joint effort between the university and the district that offered scholars up to 120 credits of in-state tuition per year, as well as partial room and board, books, and fees (University of Nebraska Omaha, 2022). This program removed financial barriers and provided experiential learning. It used a cohort model that enabled students to work closely with other students in seminars, courses and special projects designed specifically for each cohort (Peshek, 2022).

Removing barriers leads to increased diversity in the teacher pool. The National Center for Education Statistics shows that even in schools where the majority of students come from diverse racial or ethnic backgrounds, the majority of teachers are white (deBrey et al., 2018). Increasing the diversity of the teacher pool is essential because research demonstrates that all students are better served by having teachers with diverse backgrounds (Baumhardt, 2022). Furthermore, alternative teaching programs have been more successful than university programs at increasing non-white candidates. For example, Texas Teachers of Tomorrow enrollment of

non-white candidates is roughly 46% of the total enrollment (Baumhardt, Craft, Robinson, 2021).

An example of how to increase diversity and provide a quality education is highlighted by the work of Dr. Logan, who provided student teachers with a stipend of \$9,000 per semester to work in her district (Wagner, 2022). Tuition is a significant obstacle for many college-going students who are often required to take on a job while attending school. Paying student teachers is another way to remove barriers for potential educators. According to a February 2023 article from the Omaha World Herald, the number of college students who have selected Omaha Public School to student teach in has doubled, from 71 student teachers during the 2019-20 school year to 120 student teachers during the 2022-23 year. This article reports that student teachers have filled roles in social studies, math, physical education, early childhood, Spanish, special education and more. By removing friction points for teacher candidates and providing incentives, Dr. Logan positioned her district to be an attractive option for student teachers.

### **Strategy: Induction Programs**

A review of 15 empirical studies on mentoring and induction programs support the notion that induction programs have a positive impact on new teacher job satisfaction, retention, and performance (Ingersoll & Strong, 2011). Induction refers to, “support provided to novice teachers, generally within their first two years, to help them to learn pedagogical skills and develop professional practices from one designated agency” (Kwok et al., 2022). The timeframe of an induction program is important as Kini and Podolsky’s (2016) research found that the teachers’ teaching effectiveness increases the most during their first few years in the classroom (Kini & Podolsky, 2016).

Kwok et al. (2022), reference three features of induction programs: teacher coaching, program length and induction curriculum. Program length and induction curriculum vary greatly to fit the unique contexts of the district and school. The cost of induction programs may vary from state, district and school. The coaching/mentor component of induction programs has been shown, by research, to have an overall positive impact on educational outcomes. In addition, a study suggests that new teachers prefer to select their own mentor, someone who is a close colleague that they trust, and who is capable of creating a safe learning climate (Colognesi et al., 2020). Educational leaders must recognize that support for new teachers within the first several years of their development is necessary to reduce the rate of teacher turnover.

### **Summary**

If educational leaders are serious about addressing teacher shortages, focusing heavily on alternative routes to teacher certification will not suffice. Limitations for these routes should be fully understood. Despite their intention, alternative routes do not help keep teachers in the

classroom. Retention is a real issue; it is costly for districts to reeducate staff, it is bad for the culture of the school, and can lead to inconsistent experiences for students.

According to the National Commission on Teaching and America's Future, teacher turnover costs public schools nationally at least \$7.3 billion per year (Carroll, 2007). Teacher shortages not only have a financial cost they also have an academic cost for students. Jonah Rockoff, an economist from Columbia University, has found in his research that new teachers are much less effective on average when compared to teachers who have taught for five years (Baumhardt, 2021). A study using data from North Carolina on math and English Language Arts (ELA) teachers at the middle school level explored the hidden cost of teacher turnover and consistently found that the loss of a math or ELA teacher led to larger percentages of novice teachers or those with provisional licenses. In addition, the study concluded that teacher turnover led to an increase in the number of teachers not certified in specific subjects and lower average licensure test scores. These characteristics, often associated with lower quality education, were confirmed in the study by the significant drop in student math and reading scores (Sorensen & Ladd, 2020).

Addressing the teacher shortage in Kentucky needs to be examined through multiple lenses, with a focus on creating opportunities for a more diverse workforce. State leaders need to focus on policies and funding that support teacher induction programs, provide opportunities for districts to pay student teachers as a tiered educator, and allow districts more flexibility on how student teachers can be utilized. Policy reform is needed to support high-demand areas in rural and high-poverty school districts where the impact of teacher shortages is most severe (Sorensen & Ladd, 2020).

Kentucky leaders should take notice of innovators like Dr. Logan and the University of Nebraska Omaha and Dallas College by funding collaboration initiatives between districts and universities. Pipelines should be built that create a viable teaching workforce, remove barriers at the university level and focus on supporting educators within the first five years of employment. A collaborative and well-rounded approach might move districts closer to not only lessening the teacher shortage, but also providing a stronger foundation for future educators.

## Appendix A

### Kentucky Routes to Certification

#1: Exceptional Work Experience for Teaching grades P-12
<p>Candidate requirement:</p> <ul style="list-style-type: none"> <li>● Bachelor’s degree in the area he/she is seeking certification</li> <li>● Bachelor’s degree with at least a 2.75 GPA on a 4.0 scale</li> <li>● Exceptional work experience (EWE) after bachelor degree completion (not in teaching) in area seeking certification <ul style="list-style-type: none"> <li>○ Exceptional Work Experience” to mean “A person with recognized superiority as compared with others in rank, status, and attainment or superior knowledge and skill in comparison with the generally accepted standards in the area in which certification is sought.” defined by 16 KAR 9:010</li> </ul> </li> <li>● 3-5 recommendations from employers directly associated with EWE</li> <li>● A school desires to employ candidate</li> </ul>
#2: Local District Training Program for Teacher
<p>This option is under revision as of July 2022.</p>
#3: College Faculty for Teaching Grades 8-12
<p>Candidates requirement:</p> <ul style="list-style-type: none"> <li>● At least a master’s degree in academic subject for which he/she is seeking certification</li> <li>● 5 years of full-time teaching experience or its equivalent (90 sem. Credit hours) at an accredited institution of higher education in the area seeking certification</li> <li>● A school desires to employ candidate</li> <li>● 1 year provisional internship certificate</li> <li>● Participate in KTIP</li> <li>● Have a successful completion of internship year before receiving a professional certificate.</li> </ul>
#4 Adjunct Instructor for Teaching Grades P-12
<p>Candidates requirement:</p> <ul style="list-style-type: none"> <li>● An offer of employment</li> <li>● Expertise in a specific area: <ul style="list-style-type: none"> <li>○ ES= bachelor’s degree with an overall GPA 2.75</li> <li>○ MS/HS= overall GPA of 2.75 &amp; GPA of 2.75 in the major/minor or area of concentration in the subject area to be taught</li> <li>○ Vocational= have a high school diploma and at least 4 years of appropriate occupational experience</li> </ul> </li> <li>● Local district must provide an orientation program for adjunct instructors</li> <li>● This will not lead to a full state certification</li> </ul> <p>Candidates would not be eligible for continuing service status or retirement provisions.</p>
#5 Veterans of the Armed Forces
<p>Candidates requirement:</p> <ul style="list-style-type: none"> <li>● Discharged or released from active duty under honorable conditions after six years of active duty immediately before the discharge or release</li> <li>● Bachelor’s degree in subject matter or related area for which certification is sought</li> <li>● GPA of 2.75 for a bachelor's degree or hold an advanced degree</li> <li>● Passing score on EPSB- approved subject matter assessments</li> </ul> <p>Issued a one year Provisional Certificate and upon successful completion of first year of teaching receives a Professional Certificate. Troops to Teachers program is also available to provide stipends to qualifying candidates willing to teach in “high need” school settings.</p>
#6 University-based Alternative Route for Teaching



<p>Candidate requirement:</p> <ul style="list-style-type: none"> <li>• Minimum of a bachelor’s degree in a non-teaching major to pursue initial teacher certification through EPSB approved teacher preparation program at a Kentucky college or university.</li> <li>• Enrolled in the program while currently teaching in a Kentucky school district in the area for which they are seeking certification.</li> <li>• GPA 2.75 or 3.00 on the last 30 hours of credit completed.</li> <li>• Meet university admission standards for a teacher prep program.</li> </ul> <p>Issued a Temporary Provisional certificate which can be renewed two additional years beyond the initial issuance for a total of three years to complete the program.</p>
#7 Institute Alternative Route
<p>Candidate requirement:</p> <ul style="list-style-type: none"> <li>• Minimum of a bachelor’s degree with a declared academic major in the area in which certification is sought or a graduate degree in a field related to the area certification is sought.</li> <li>• GPA 2.75 or 3.00 on the last 30 hours of credit completed</li> <li>• Passing score on GRE or CASE as designated by EPSB</li> <li>• Passing score on the academic content assessment in the area in which certification is being sought as designated by EPSB</li> </ul> <p>Prior to receiving the one year Provisional certificate or during the first year of the certificate, the teacher shall complete the following:</p> <ul style="list-style-type: none"> <li>• A candidate seeking elementary teaching= 240 institute hours based on a six hour day for eight weeks.</li> <li>• A candidate seeking middle/secondary teaching= 180 institute hours based on a six hour day for eight weeks.</li> </ul>
#8 Teach for America (TFA)
<p>Candidate requirement:</p> <ul style="list-style-type: none"> <li>• Minimum of a bachelor’s degree</li> <li>• Has an offer of employment form a local school district in the area of certification being sought</li> <li>• Meets the participation criteria for the TFA program</li> <li>• Successfully completes all training requirements of the TFA program</li> <li>• Passes all content assessments required by EPSB in the area of certification being sought</li> </ul>
#9 Expedited Route
<p>Candidate requirement:</p> <ul style="list-style-type: none"> <li>• Employed in a classified position while completing coursework</li> <li>• Completes a bachelor degree within three years</li> <li>• Completes certification assessments</li> </ul>

Information gathered from Educational Professional Standards Board (EPSB) January 21, 2023.

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