

Chapter 11

The Forgotten Many: Rural Gifted Learners

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ABSTRACT

Limited economic resources and geographic challenges can lead rural schools in areas experiencing poverty to deprioritize gifted education. However, for the wellbeing of individual students and their communities, investing in quality rural gifted education is crucial. In this chapter, the authors discuss some of the challenges to providing equitable gifted programming to students in rural areas and present approaches to meeting those challenges (e.g., cluster grouping, mentoring). They then describe a large-scale federally-funded research project, Promoting PLACE in Rural Schools, which demonstrated methods districts can use to bolster gifted education programming. With 14 rural districts in high-poverty areas of the southeastern United States, researchers worked with teachers and school leaders to establish universal screening processes for identifying giftedness using local norms, to teach students the value of a growth mindset in reducing stereotype threat, and to train teachers on using a place-based curriculum to provide more impactful language arts instruction to gifted rural students.

INTRODUCTION

Rural communities are characterized by many strengths. Not only do rural communities provide energy and food resources for those across the United States, they also provide respite and a place to enjoy the natural beauty of their mountains, rivers, and forests. Moreover, rural communities can be close-knit,

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where the benefits of knowing your neighbor can outweigh the allure of urban amenities. Rural people tend to consider *home* and *place* to be integral parts of their identities.

However, for all the positives associated with rural life (and there are many), one consistent challenge has been contending with educational inequity for rural students. The high incidence of poverty among rural communities (Tieken, 2014), often due to dwindling opportunities for work, results in a lack of resources for educational and social support. This is evidenced, for example, by a century-long struggle to staff rural schools (Biddle & Azano, 2016) and to provide high-quality programming for rural gifted students. Economic inequities further intensify these challenges. For example, rural Appalachia's well documented economic reliance on the coal mining industry was upended by environmental policies, globalization, and the pressure for clean energy, resulting in higher than average regional unemployment (and economic underdevelopment, see Peine et al., 2020) when compared to the national average (Appalachian Regional Commission, 2015). Similarly, a shift in the global economy has caused the closure of factories in rural places all across the United States as companies have sourced labor overseas at lower costs. Historically, these economic factors have had negative effects on rural schools.

Geographic isolation exacerbates the economic challenges facing rural schools, and rural schools have historically had difficulty recruiting teachers to districts that are unable to provide competitive salaries and that may not afford the amenities teachers seek when choosing where to live. Further, due to funding structures that privilege students in urban and suburban places (Sutherland & Seelig, 2021), rural schools often lack resources like access to computers, library books, updated curriculum materials, professional development for teachers, and reliable internet. These factors present a significant challenge for the nearly 20% of U.S. students (Showalter et al., 2019) who attend schools that are considered rural by the National Center for Education Statistics (n.d.), which bases its determinations on a community's population density and proximity to metropolitan areas (i.e., cities with populations of over 50,000).

With decreasing availability of local funds for education because of increasing poverty and inadequate state and federal funding (Showalter et al., 2019), school district resources are stretched. As a result, gifted education is often not prioritized in rural schools (Lewis & Boswell, 2020a) for many reasons. First, if the overall performance of a district's students on high-stakes standardized testing fails to meet benchmarks established by the federal government, it could result in punitive measures (Sutherland & Seelig, 2021). As a result, district leaders and boards of education may deem it necessary to allocate a large proportion of resources, both personnel and instructional materials, to remediation. Moreover, there is no federal mandate for providing specialized programming for gifted students (as there is for students protected by Individuals with Disabilities Education Act [IDEA] and the Americans with Disabilities Act [ADA], for example). While most states have guidelines in place, the absence of federal regulations and low levels of funding at the state level for gifted programming (often none; Rin et al., 2020) communicates a message about the value of gifted education. Although rural districts may employ teachers and/or coordinators to serve gifted students, these teachers and coordinators often split their time between gifted programming and other responsibilities (e.g., coordinating special education services), or they may have to travel long distances to reach geographically widespread schools (Matthews et al., 2021; Miller & Brigandi, 2020).

It is our view, however, that gifted services should be considered an essential part of the elementary curriculum in that challenging young gifted students with advanced content and opportunities to think critically and creatively will equip them to take advanced classes in middle and high school, positioning them to take advantage of a wide range of future career opportunities. This is extremely important for the wellbeing of individual students, but investing in gifted education will also pay dividends in terms of

the revitalization of rural communities, especially those that have been hard hit by devastating economic circumstances. In the past, rural scholars have noted a trend of “outmigration” of the most talented rural students—those who succeed in school, go on to college, and never return to their hometowns because job opportunities are so scarce, especially jobs that require the specialized skills they learned in college (Carr & Kefalas, 2009; Schafft & Maselli, 2021). If, instead, rural schools were to identify ways to expand the pool of students who matriculate through quality gifted education programming, there is a greater chance that young adults who love the places they came from will return, bringing new ideas for innovation to bolster their local economies (Davis et al., 2020; A. Howley et al., 2009; C. Howley, 2009).

Studies of rural schools document teacher and administrator commitment to and efforts toward providing the best possible education for their students. Still, rural students, particularly those living in communities with high incidences of poverty, are at a distinct disadvantage in terms of their ability to access high-quality gifted services (Azano, 2014; Kettler et al., 2015; Latz & Adams, 2011; Peters & Engerrand, 2016; Rasheed, 2019), and this inequity must be addressed as a matter of social justice. As such, in this chapter we will first discuss some of the key considerations that need to be addressed when considering the fields of rural education and gifted education together. Then, we describe an intervention designed to expand rural students’ access to gifted services using rural-specific identification methods and a place-based language arts enrichment curriculum. Finally, we provide a list of recommendations for teachers, school leaders, and university professors seeking to build upon the strengths of rural communities in an effort to create and sustain equitable, high-quality programming for gifted rural students.

GIFTED EDUCATION IN RURAL PLACES

Research at the intersection of rurality and giftedness is scarce (Rasheed, 2019), though attempts to understand gifted education in high-poverty rural places are not new and attention to the issues in this educational domain is on the rise. Understanding of the current status of rural gifted education is predicated on examination of prior research and the current status of issues in the fields of gifted education and the rural education context.

Past Efforts to Study and Improve Rural Gifted Education

Two projects are foundational in the characterizing the evolution of rural gifted education, Project Spring and Project Aspire.

Project Spring

In the early 1990s, researchers (Aamidor & Spicker, 1995; Spicker & Aamidor, 1996) developed alternative processes to identify rural children for gifted services in an Appalachian region of Indiana, suggesting rural-specific measures schools could use to widen the pool of eligible students. They trained teachers to recognize giftedness as it may manifest in their specific student populations, then applied what they learned to high-poverty schools in rural South Carolina, where a large proportion of students were Black, and rural New Mexico, where a large proportion of students were Hispanic and had learned Spanish as their first language.

Project Aspire

Project Aspire (Burney & Cross, 2006), a Jacob K. Javits funded study, provided training to school counselors and teachers in identifying giftedness in rural middle and high school students and then provided support to those students in preparing for and taking Advanced Placement courses through distance learning. Burney and Cross reported on several “lessons” learned from the study, including the need to consider rural places as diverse and distinct communities rather than monolithic; the need to intervene early in gifted students’ school careers to ameliorate some of the challenges of poverty; and the need to address rural students’ self-efficacy and self-concept as possible barriers to learning and success.

However, a current reading of their work seems to reveal a perception of rural places as in need of “fixing” by people from the outside. For example, the very first sentence of their article reads, “What can *we* do to improve the lives of rural students who are in environments of poverty?” (Burney & Cross, 2006, p. 14, emphasis added). Immediately, the authors positioned themselves—and the educators likely to read this piece—as a “we” who have power to “improve the lives” of rural students, thus assuming a lack of agency on the part of the students (and their communities) to “improve” their own lives. Casting rural communities as “environments of poverty” from the start also assigns an implied permanence to the socioeconomic condition, whereas a phrasing such as “communities experiencing poverty” might project a more hopeful view. Burney and Cross also commented: “It is vital that schools provide advanced educational options in grades K–12 because these are likely the *only* opportunities for gifted students from poverty to develop their talents” (p. 14, emphasis added). While we agree that rural students living in communities experiencing poverty tend to have fewer opportunities than those living in communities with greater wealth (Rasheed, 2019)—and of course we are advocates for equitable educational experiences for rural students—suggesting that “these are likely the *only* opportunities” severely discounts the benefits of living in rural places and implies that community members have nothing of value to offer their own students. Other indicators of the underlying view of rural people as in need of saving include multiple references to the writing of Ruby Payne, a writer long criticized for perpetuating deficit views of people experiencing poverty (e.g., Bomer et al., 2008; Gorski, 2012; Van Der Valk, 2016).

Myths about Giftedness

In understanding the issues facing the field of *rural* gifted education, one must first examine the issues of gifted education. These issues are reflected in the myths about giftedness pervasive across cultures, so much so that the National Association for Gifted Children (NAGC, n.d.) lists some of the most common myths on its website. Among them is the notion that gifted children are inherently “well-behaved,” so a child who has a difficult time sitting still is unlikely to be recognized as gifted by their teachers. Another myth is that giftedness is correlated with high achievement, but sometimes children who perform well in school—especially in the early grades—have simply been given more opportunities to learn (Lohman, 2013) than other children. For example, a child with more experience being read to will likely perform better on a first-grade spelling test, but that does not necessarily mean they are gifted. Moreover, a gifted child may actually earn grades much lower than their ability level simply because they are bored with the assignment and do not apply their knowledge to answering the questions or completing the task. In general, there is the persistent conception that gifted students “will be OK” with or without gifted services, so tending to their need for advanced instruction is not considered a wise allocation of limited resources.

Attending to the Rural Context

In rural places, there may actually be an additional stigma or barriers to recognizing and developing academic talent. In some rural areas, sporting events are central to community life, so athleticism is regarded with greater esteem than intellectualism (Lewis & Boswell, 2020a; Lowman, 2020), and students may not want to be seen as “book smart.” In places with a central industry that dominates and offers ample employment options that do not require a college degree (e.g., working in meat processing plants or in the logging and fishing industries), there can be a sense that it is not even useful to do well in school (C. Howley, 2009). Sometimes, gifted students refuse services because they don’t want to have to make up the work their classmates would have been doing while they were pulled out to work with the gifted teacher (Lewis & Boswell, 2020b; Novak & Jones, 2020), indicating a misunderstanding on the part of the school community at large about how gifted programming should work. Additionally, because of the trend towards outmigration in some rural places (Carr & Kefalas, 2009), there is a sense in some communities that encouraging gifted education will lead students to aspire to leave their hometowns to attend college—and an accompanying fear that they will never return (C. Howley, 2009). The students themselves may not see college as an option because of barriers such as lack of emotional support and encouragement for college attendance, lack of models for those who would be first generation college students, and financial limitations (Snider, n.d.).

ISSUES IN IDENTIFYING RURAL STUDENTS AS GIFTED

The identification of students as gifted varies greatly across states and localities within states (Callahan et al., 2017; Rin et al., 2020). In some school districts, teachers make referrals for students they see as having exhibited signs of giftedness, then those students might be screened with aptitude tests like the Cognitive Abilities Test (CogAT). Then, students earning a predetermined cut score (e.g., a score that places them in the 96th percentile according to national norms) may be recommended for gifted services. Alternatively, school personnel may first look at a pool of students who earn good grades and who perform well on achievement tests like the Iowa Assessment, the MAP test, or year-end statewide testing, then use a complex rating system to select students to participate in gifted programming. In other school districts, profiles of students may be examined by a panel of professionals within the district to determine which students’ educational programs should be modified through enrichment or acceleration.

Unfortunately, some of these methods place rural students, particularly those living in remote rural communities experiencing poverty, at a distinct disadvantage. At the time of testing, such students would not have had the same opportunity to learn (Lohman, 2013) as students in urban and suburban communities, who likely have more resources available, both at home and at school, and who live closer to museums, theaters, and a variety of other places that provide enriching cultural experiences. Parents in high-poverty rural areas are less likely than urban and suburban parents to have finished high school or earned college degrees (Fain, 2019), leaving them less equipped to help their preschool-aged students develop skills needed by emergent readers (Bus et al., 1995; Dougherty & Paratore, 2018; Heath, 1983). Therefore, it is not reasonable to compare rural students’ achievement test scores against national norms, especially when doing so tends to leave only a small pool of students eligible to receive services.

Further, perhaps because so few educators, including rural educators, have obtained advanced certification in gifted education (Rin et al., 2020) or even received minimal professional development

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related to gifted instruction (e.g., recognizing characteristics of gifted students or developing appropriate curricular or instructional modifications for gifted learners; Callahan et al., 2017), myths about how gifted students should look or act pervade rural school systems. As a result, it may be unlikely that teachers will recognize certain behaviors as manifestations of giftedness in students who do not fit a stereotypic image of giftedness. Therefore, because teachers are often positioned as gatekeepers to gifted education through the referral or rating of gifted behaviors of students in their classrooms, many students with talents may never be identified. Unfortunately, without the training needed to dispel the myths and to recognize the particular ways in which rural students may demonstrate signs of giftedness, teachers-as-gatekeepers may contribute to underrepresented students being missed for identification in gifted programs (Peters & Engerrand, 2016). Latz and Adams (2011) suggested teachers undergo “a process of *unlearning* as well as learning” with regard to their understanding of students from various backgrounds, making educational spaces “more equitable and conducive to the learning needs of all students” (p. 782, emphasis in original).

A PICTURE OF RURAL GIFTED EDUCATION

No two rural places are exactly alike, and among rural school districts, the academic differences among students may be addressed very differently. In some school districts, a separate teacher may be assigned to offer pull-out instruction to gifted students. In others, classroom teachers may be expected to differentiate to meet the advanced needs of their gifted students, yet they are provided little training or support in doing so. Moreover, with constant pressure to ensure all their students achieve at levels necessary for them to pass state-mandated standardized testing, teachers often feel they cannot afford to spend much time attending to the academic needs of their gifted students, who are in no danger of failing high-stakes testing (Moon et al., 2007; Scot et al., 2009).

Sometimes, classroom teachers may be resistant to offering identified gifted students enrichment or acceleration opportunities because they fear professional repercussions. For example, a gifted teacher in one rural district reported receiving pushback from general education teachers when she arrived for her students’ pull-out lessons (Matthews et al., 2021). She felt it was because the teachers feared students would miss the regular instruction geared toward preparing students for the high-stakes tests, “primarily because teachers’ annual evaluations are based on student scores from the state’s proficiency exam” (p. 197). This demonstrates a misunderstanding of gifted education—it is meant to help children learn *beyond* state standards, not replace them—and it problematizes the practice of tying teachers’ evaluations to their students’ test scores.

In other school districts, teachers (though not necessarily those with gifted certifications) may be paid a small stipend to offer enrichment opportunities to gifted students, often through afterschool programs rather than during the school day. While such programs can be meaningful in the development of gifted students’ potential, they are not necessarily equitable because all students may not be able to attend. For example, students living in remote areas may have bus rides over an hour long, so it might not be feasible for them to find alternative transportation on days when the afterschool program would meet.

Miller and Brigandi (2020) described a case study of three teachers tasked with gifted education in their rural West Virginia school districts whose experiences are fairly typical of teachers in rural areas. All three teachers were new to teaching, and none of them was certified in gifted education. Only one teacher had taken courses to prepare her for the role, but she reported feeling that the content was not

applicable to the rural context in which she taught, indicating “a misalignment between the strategies she learned in her classes and the interests and needs of her rural students” (p. 107). Because there was no set curriculum for instructing gifted students in their districts, all three teachers reported spending long hours searching the Pinterest and Teachers Pay Teachers websites for activities they could do with their gifted students, but unfortunately research (Gallagher et al., 2019) has documented that teachers who rely on these types of web resources often do not apply a critical lens to how the activities may or may not be appropriate for the learning needs of their students.

Many times in rural places, there is only person providing gifted services across the whole school system, which leads to a feeling of isolation for many rural gifted teachers (Floyd et al., 2011). Adding to that is a sense of transience when teachers spend hours traveling back and forth among geographically disparate schools, which both limits the amount of time they can spend with students and diminishes the opportunity to establish relationships with colleagues in any given school. Perhaps as a result, teachers report feeling their roles are misunderstood and undervalued. For instance, one itinerant teacher in Miller and Brigandi’s (2020) case study sought more instructional time with her gifted students, but the principal at one of the schools she taught in refused to release her from lunchroom duty to work with students, demonstrating a devaluing of her position.

Rural Stereotyping

Depictions of rural people in movies, television shows, and on other media platforms are often unflattering. The popularity of caricatures like “Granny” on the *Beverly Hillbillies* and Gomer Pyle on *The Andy Griffith Show* helped construct the mistaken—yet pervasive—societal assumption that rural people are “backwards,” lazy, volatile, and unintelligent. Regardless of how they started, stereotypes of rural people affect the way rural students perceive themselves and their future prospects. Of Appalachian rural students in particular, Miller & Brigandi (2020) wrote,

These narratives about the nature of poverty, of rurality, and of Appalachia . . . have real power to impact and shape the lives of the people to which they refer, making young people particularly vulnerable if they indeed internalize these constructions and struggle to make sense of what outsiders think of them. (p. 47)

Rural students of color experience the added effects of stereotypes about their race, ethnicity, and/or language proficiency; LGBTQ+ rural students, rural students of various religious backgrounds, and rural students with disabilities face additional stereotypes as well.

APPROACHES TO MEETING THE CHALLENGES OF RURAL GIFTED EDUCATION

There are a number of ways educators and other community members have sought to ameliorate the challenges faced by gifted students in rural communities, including acceleration, mentoring, special programs, and using place-based curricula.

Acceleration and Cluster Grouping

One fairly simple—and cost-effective—way to meet the needs of rural gifted students is to allow them to advance through the curriculum at a faster pace than their peers (A. Howley et al., 1988). This could mean skipping an entire grade, which has been shown not to have a detrimental impact on students' socioemotional health as is sometimes feared (Plucker & Callahan, 2020). In the elementary grades, if a student shows extremely high potential in a certain subject area, like math, they could leave their classroom to attend class with students in a higher grade for just that subject. In middle and high school, students can take advanced courses, sometimes earning college credit (Rin et al., 2020). In rural districts where there may not be enough students to justify a teacher's time to hold a particular class, students can access online courses (Floyd et al., 2011), although some remote locations may still not have the broadband internet to make that feasible.

Researchers also recommend that gifted students be grouped together in classrooms, allowing them to collaborate on projects designed to meet their specialized learning needs and to interact with peers at a more challenging intellectual level (Davis et al., 2020; Floyd et al., 2011; Gentry, 2018; Plucker & Callahan, 2014, 2020; Plucker & Peters, 2018; Steenbergen-Hu et al., 2016). Because of small numbers of gifted students at a particular grade level in small rural schools, the practice of cluster grouping, which also comes at no cost to school districts, is an excellent, research-documented option for rural districts with budget challenges (Gentry, 2018).

Mentoring

Connecting students with adults in the community (or outside the community via internet) can help rural students learn about career possibilities from those with relevant experience. Local churches can be a meaningful part of rural students' lives, as can afterschool programs that link community members with students to build relationships and provide mentoring. On this subject, Floyd and colleagues (2011) wrote, "The community can serve as a resource with its residents willing to offer and adapt available resources to provide and enhance open-ended learning opportunities" (p. 36).

Joubert (2021) addressed the dearth of Black schoolteachers in many rural places and the way adults in his community growing up stepped in as mentors, saying "Even if there aren't Black teachers in rural schools, there *are* Black teachers in rural communities." He described how an older man in his hometown taught him and his brothers to ride horses when they were younger, then introduced him to the work of Toni Morrison when he was a teenager, showing an interest in the development of his skills, intellect, and criticality (Muhammad, 2020).

Special Programs

At the secondary level, gifted students may also have the option of enrolling in dual-enrollment programs with institutions of higher education, attending state-offered governor's schools, or even enrolling early in college programs. Distance may be considered a limiting factor, but with increased offerings online, many rural students may be able to avail themselves of these offerings as well as advanced placement courses that cannot be offered in their schools because of insufficient enrollment. Recent commitment to increasing broadband capacity in rural areas should make such options more accessible (Marré, 2020).

Place-Based Curricula

Floyd and colleagues (2011) wrote, “Once rural students are identified as gifted, changes within traditional gifted and talented programs are needed to make sure they remain in and benefit from the program” (p. 36). This directive means building instruction on the strong foundation of place, because “how we see the world is profoundly influenced by the geographical, social and cultural attributes of the place(s) we inhabit” (McInerney et al., 2011). Where people live and their place of origin strongly affects their identities and the way they see the world. Accordingly, teaching from a place-based perspective helps rural students see school as relevant to their lives (Azano, 2011) and shows them they have agency to bring about positive changes in their own rural communities (Azano, 2014). In her review of research on the intersection of giftedness and rurality, Rasheed (2019) wrote:

Place has the potential to garner students’ attention in the classroom and make meaningful curricular connections to their lives outside of the classroom. Not only is it possible to make the curriculum more relevant to the students’ past and present when place is specifically part of the curricula, there are opportunities for connections between the students’ futures and their rural communities. (p. 74–75)

Hence the curriculum to be offered to gifted rural students should be rich and strong curriculum that “will bring their performance in line with potential,” thereby giving students “the opportunity to develop the behaviors that allow for success” (Callahan, 2009).

Promoting PLACE in Rural Schools

Co-authors Callahan and Azano first conceived of the project Promoting PLACE in Rural Schools nearly a decade ago when collaborating on research investigating the effectiveness of the CLEAR (Challenge Leading to Engagement, Achievement, and Results) curriculum model. The CLEAR model was rooted in a synthesis of three influential models for instruction: Kaplan’s (2005) Depth and Complexity Model, Renzulli’s (Renzulli & Reis, 1985, 2001) Schoolwide Enrichment Model, and Tomlinson’s (1995, 1999) Differentiated Instruction Model and reflected a commitment to **C**ontinual formative assessment, **L**earning goals, **E**xperiences, **A**uthentic products, and **R**ich curriculum. When analyzing data collected in the course of testing the effectiveness and validity of the curriculum, Azano and Callahan noted the very low rates of identification of gifted students in rural schools and the lower fidelity of implementation among teachers in those schools. Questions relating to identification and challenges in implementing the curriculum emerged. *What* could be done to identify more talent in rural populations? *How* and *why* do teachers deviate from the lessons as written? Hypothesizing about factors of rurality and poverty that influenced identification and that perhaps rural teachers felt it necessary to adapt the curriculum because it was not attuned closely enough to the particular contexts in which they taught, Callahan and Azano designed Promoting PLACE (Place, Literacy, Achievement, Community, and Engagement) in Rural Schools.

Overview

Promoting PLACE involved 14 high-poverty rural districts (8 treatment, 6 control) in Virginia and Kentucky over six years. The primary goals of the project were:

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- to increase the number of students identified for gifted services in high-poverty rural school districts;
- to increase the achievement of identified students in treatment districts using a rural-specific place-based language arts curriculum; and
- to reduce stereotype threat (Aronson & Steele, 2005) and increase a growth mindset (Dweck, 2006) among participating rural students.

To meet these goals, Callahan, Azano, and their team of researchers developed an identification protocol involving two strategies recommended in the literature for increasing representation of diverse students, and they modified the curriculum from the prior study for the students identified. The project was structured to compare identified students in treatment and control schools. All schools (treatment and control) identified an expanded pool of gifted students. Teachers in the treatment group, with support from grant staff, taught a revised, place-based version of the CLEAR curriculum to third- and fourth-grade students. Students in the treatment districts also participated in two day-long interventions addressing stereotype threat and growth mindset.

The Identification Processes

Undergirding the identification process was a focus on using rural-specific, place-based methods for identification of students likely to succeed in an advanced level language arts curriculum.

Universal Screening

Based on the recommendations from the gifted literature (e.g., Card & Guilano, 2015) the verbal battery of the CogAT (Lohman & Hagan, 2005) was administered to all students in participating districts in the spring of their second-grade year. The verbal subtest was used in order to identify talent in the same domain as the curricular intervention that was to be used. Rather than Level 8, which is generally given to second graders, Level 9 was used based on the recommendation of Dr. David Lohman (personal communication, 2014). The recommendation was based on the constructs assessed and the lower risk of ceiling effects (i.e., where a large number of students would perform so well on the test that it would be difficult to distinguish those who truly exhibited giftedness). Also, because the language arts curriculum we intended to use was quite rigorous, it was imperative that the selection process would yield students academically ready to be successful.

Local Norms

Although some localities—and some states—have traditionally relied on scores on standardized tests which are based on national norming samples in making decisions about eligibility for gifted services, students in high-poverty rural schools are likely not accurately assessed when those comparisons are used because of the factor Lohman (2013) identified as “opportunity to learn.” That is, students from high-poverty rural schools may not have the same exposure to experienced teachers, rich resources, varied learning environments and experiences as students from suburban and more highly resourced schools. Thus, local and national norms were computed for consideration in the process of determining a more expanded and diverse pool of gifted students in target schools.

Teacher Ratings

Although relying on teacher ratings to identify students as gifted can be problematic if not based on accurate conceptions of giftedness, teachers have the opportunity of observing student behaviors on a regular basis and possess the potential to offer valuable insight into their students' abilities and talents. For that reason, teachers in the targeted school districts were trained to evaluate their students on three of the Scales for Rating the Behavioral Characteristics of Superior Students (Reading, Creativity, and Motivation; Renzulli et al., 2013). Essential to assuring the equity of this process was providing specialized training to second-grade teachers on how to recognize gifted behaviors and characteristics in rural students. The training included an explanation of the meaning of the traits described on the scales as well as illustrations of how students can manifest giftedness in nontraditional ways (e.g., a student who is fascinated by insects and who will tell everyone who will listen about the life cycle of the cicadas living in the woods behind their house). Teachers shared examples of such behaviors they had observed in their own students, and at the end of the session, each teacher completed the rating scale for every student in their class (universal screening applied once again). School and classroom norms were computed to mitigate leniency or severity in a particular teacher's ratings. Meetings with school decision-makers to supplement school-identified pools of gifted students with a more diverse group identified by the two new assessments yielded the final group of students for treatment and control schools.

In all school districts, the administrators and staff agreed to expand the pool of identified gifted students beyond those who were identified for gifted services using existing processes in the school district. In many cases, the school personnel were (pleasantly) surprised by the performance levels of students on the CogAT and/or the behavioral rating scales.

Promoting PLACE Curriculum

The four units that had been developed and validated in the earlier research project (Folklore, Poetry, Fiction, and Research) were adapted to emphasize a sense of place—specifically, rural places. Because rural places are very different depending on their geography, history, and culture, it was important to identify fundamental information about the areas in which participating districts were located to determine what poems, stories, and folktales included in the units of study would be most likely to resonate with students living there. Accordingly, teachers in the treatment districts were asked in a survey to provide information about what life is like in their communities. Teachers shared information about the industries that employed many local residents (e.g., poultry farming in central Virginia; commercial fishing on the eastern shore), festivals and similar local events, and local legends and important events in the history of their communities.

This “insider” information was coupled with what was widely known about the areas (e.g., tourist destinations and famous landmarks located in particular locales) to tailor the curriculum to align with the rural places in which students lived. For example, during the poetry unit, students living in the Appalachian region studied “Sunset in the Mountains” by Lyn Aydelette (1991), while students living near the sea studied “The Sandpiper” by Celia Thaxter (2003). By providing literature about places similar to their own communities, students could make personal connections to the curriculum and come to understand that their own place is worth writing about, efforts that help literacy instruction become “motivated, active, creative, and effective” (Brooke, 2003, p. x).

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All units were carefully aligned with both the Virginia Standards of Learning (SOLs; 2017) and the Common Core State Standards (CCSS; 2010) for third and fourth grades, yet lessons provided a much deeper and more complex exploration of the skills needed to master the standards. That way, teachers and school leaders could rest assured their students were not “missing” any instruction that would prepare them for required end-of-year testing. On the contrary, students were exposed to a level of knowledge, understanding, and application that would result in preparedness beyond that required for success on state-level tests. The use of the underlying models of gifted curriculum for differentiation of lessons based on formative assessment provided teachers with clear guidance in grouping students for instruction, learning activities, and resources appropriate for students at their levels of performance. Students had opportunities to develop complex levels of thinking, creative performance, and products that were representative of professionals in the field of writing and analysis in each of the units studied.

Growth Mindset and Stereotype Threat Interventions

In the spring of each year, students in the treatment districts participated in day-long activities designed to help increase a growth mindset (Dweck, 2006) and reduce stereotype threat (Aronson & Steele, 2005) for participating students. A growth mindset is the belief that intelligence is not “fixed,” but that it can increase through learning. With gifted students, for whom most school activities tend to come easily, attending challenging lessons designed for gifted students can cause resistance, as without a growth mindset, they may experience anxiety and self-doubt. Specific instructions to teachers on using particular questioning strategies and reinforcements for effort were embedded in the curriculum as well. For example, to combat stereotype threat, or the belief in negative stereotypes about one’s own culture, the Folklore unit includes an activity in which students discuss the traits of the “typical” princess character and how all princesses do not necessarily exhibit those traits (e.g., Princess Fiona from *Shrek*). Teachers then lead students in a discussion about how stereotypes about rural people do not necessarily apply to everyone who lives in a rural place.

To promote the development of a growth mindset, students were given the opportunity to participate in a WebQuest activity (Dodge, 2015) called “Inside the Human Brain: Learning How We Learn,” influenced by the work of Blackwell et al. (2007). The WebQuest was an inquiry-based lesson that prompted students to read, source, and connect information through the internet (Dodge, 2015; El-Abd, 2021). Its objectives were to help students understand that the brain is very flexible, made up of many parts, and that there is no limit to how much a person can learn.

Part of each end-of-year mindset intervention included addressing stereotype threat via lessons like one titled “How the Brain Is Affected by Beliefs” in which students watch a video about stereotype threat, do some personal writing on the topic, and engage in discussions of how stereotype threat is a challenge that can be overcome.

Outcomes

The outcomes of the Promoting PLACE in Rural Schools project aligned with the original project goals of increasing the number of students identified for gifted services in high-poverty rural school districts and increasing the achievement of identified students in treatment districts using a rural-specific place-based language arts curriculum. More detailed descriptions of the project can be found in the monograph, *Gifted Education in Rural Schools: Developing Place-Based Interventions* (Azano & Callahan, 2021).

Reading Scores

At the beginning of third grade (pretest) and the end of fourth grade (posttest), the language arts proficiency of all students was assessed using three subscales of the Iowa Assessments: reading comprehension, vocabulary, and written expression. A comparison of pre- and post-test scores revealed that students in the treatment group—those who were taught using the Promoting PLACE curriculum—outperformed those in the control group who were taught using whatever methods were normally used for gifted education in their schools. These data support the conclusion that the curriculum was highly effective in meeting the needs of students who are gifted in the domain of language arts. Even more exciting, perhaps, was that these results showed that students who were identified using place-based methods—that is, students who would have been missed with traditional methods—actually achieved *higher* scores, on average, than students in the control districts. This finding dispels the myth that including students who are not identified by traditional strategies diminishes the quality and rigor of gifted programming.

Content assessments developed to correspond with each of the four units of the Promoting PLACE curriculum and aligned with the Virginia SOLs and the CCSS were administered to treatment and control students in the spring of each academic year (with each group taking the assessments relating to the units taught that year). These assessments were reviewed by experts in gifted education and literacy education for content validity and were revised according to their feedback. Treatment students significantly outperformed control students on each assessment, again showing that being taught using the place-based curriculum was advantageous for rural students.

Writing Samples

The results of an analysis of the stories students wrote as the culminating project of the Fiction unit revealed close connections to rurality and place (Kuehl, 2020b; Kuehl et al., 2020), strong connections to the place-based literature used throughout the curriculum (Kuehl, 2020a), and heartwarming depictions of rural families (Kuehl, 2021). Students wrote stories in a wide range of genres (e.g., realistic fiction, fantasy, science fiction, adventure), and many students demonstrated a high level of skill far surpassing state standards for fourth grade (Kuehl, 2020b). A particularly salient example of writing that demonstrated both an extraordinary level of skill and connection to place was a story called “Vines Come Alive” (Kuehl, 2020a) in which the narrator used vivid imagery to set the scene:

I stood on the top of the tall mountain, relishing every minute, every second, every moment. The cool breeze against my face, the wind toying with my umber-colored hair and the warm glow of the sun warming my skin. . . . I sat down. I sat for a long, long time, watching the sun climb slowly up into the sky, its warm glow radiating onto the earth. A rock wren landed beside me, cocking its head. I smiled, watching it as it hopped back and forth before spreading its wings and flying off. I sighed. . . . My observant eyes and patience caught movements commonly unnoticed. I saw the sparrows collecting twigs and leaves for their nests, leaves falling from trees, squirrels storing nuts for the winter and ants working hard to build homes, bit by bit, one step at a time. (p. 33)

For another study (Bass et al., 2020), researchers analyzed writing samples obtained from students in both treatment and control groups before and after the intervention. Students were asked to write a letter describing their school to a hypothetical new student for the first piece of writing, and to describe

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a place that is special to them for the second piece. Bass and colleagues found that while connections to place were evident in the writing of students in both groups, the treatment students' writing included "deeper and more critical place connections" (p. 14). Treatment students used more descriptive and vivid language; they demonstrated an understanding of how the people around them shape their sense of place; and they expanded their concepts of place to more than just their immediate surroundings.

Affective Outcomes

To determine whether our mindset interventions were successful, students were asked to complete two assessments before and after the treatment: the Implicit Theories of Intelligence scale (Dweck, 2000) and the "Who I Am and How I Learn" scale, the latter of which we created to measure the influence of stereotype threat on students' thinking (information about establishing validity of this scale can be found in Callahan et al., 2020). There were no statistically significant results indicating that the interventions either increased growth mindset or decreased stereotype threat. This may have been because of the relatively high scores indicating strong growth mindsets and low stereotype threat in pretests and/or the weak treatment (only two sessions which were not attended by all students). Anecdotal evidence indicates students enjoyed participating in these events.

RECOMMENDATIONS

The experiences and data that have characterized Promoting PLACE in Rural Schools has led to better understanding of the needs of gifted students who live in rural places, and we offer the following recommendations for teachers and school leaders wishing to ensure rural students have equitable opportunities to learn and grow through gifted programming.

- **Implement Universal Screening.** Inherent biases, even when we work to disrupt them, can influence our perceptions of students and what it means to be gifted. *All* students deserve the opportunity to be screened for giftedness using measures of aptitude, not achievement.
- **Use Teacher Ratings in Conjunction with Professional Development.** Teachers have valuable insight to share about their students' classroom behaviors and potential for giftedness, and we recommend they complete a scale (like the Scales for Rating the Behavioral Characteristics of Superior Students; Renzulli et al., 2013) for all the students in their class as part of the referral and recommendation process. However, because there is a significant body of literature suggesting that historically minoritized students (in particular, students of color) are underrepresented in gifted education, it is *imperative* that teachers receive professional development focused on gaining cultural competency (Davis et al., 2020; Lewis et al., 2018, 2020; Miller & Brigandi, 2020; Novak & Jones, 2020) and recognizing the specific ways rural students—especially rural students from high-poverty communities and rural students with intersectional identities—may exhibit signs of giftedness.
- **Use a Carefully Developed Curriculum Rooted in Place and Tied to Identified Area of Talent.** It is unfair to expect rural gifted teachers, many of whom have not earned specific credentials in gifted education, to craft their own curricula from scratch, especially when they are likely serving children across multiple grade levels and in multiple schools, sometimes in addition to other pro-

fessional responsibilities. Providing a proven curriculum that emphasizes students' personal connections to place ensures rural students receive gifted instruction that is equitable to that received by their urban and suburban peers. Further, students should be offered advanced instruction in the domain in which they have exhibited talent, whether that be language arts, mathematics, content area disciplines, or some combination thereof.

- **Provide Instructional Support for Rural Teachers of Gifted Students.** School districts would likely receive an impressive return on investments made in additional coursework and/or professional development opportunities for rural teachers of gifted students. In addition to the pedagogical knowledge gained, opportunities to connect with others in the same position can help reduce the feelings of isolation that might drive rural teachers away from gifted education (Floyd et al., 2011; Miller & Brigandi, 2020).
- **Group Gifted Students Together.** Teachers need to recognize a critical mass of students with specific learning differences in order to rationalize the commitment of planning time and instructional time to the learning needs of exceptional students. Cluster grouping allows for the creation of such groupings without creating tracking situations (Gentry, 2018; Plucker & Callahan, 2020).
- **Find Ways to Educate the Community About the Importance of Gifted Education.** Rural communities represent meaningful opportunities for engagement. Partnering with local businesses, tourist industries, and community organizations not only provides relevant and place-based opportunities for students, but it also advocates for gifted programming beyond the school walls. In Promoting PLACE, there were several examples of teachers leveraging community resources to elevate their work. In one district, for example, a teacher organized a research gala to showcase her students' research projects in the gymnasium lobby prior to a high school basketball game. This allowed the general community to recognize the talent of its young people and for the students to have an authentic audience for their work.
- **Encouraging Affirming Language.** The challenges facing rural communities experiencing poverty are very real, and although none of us currently lives in this type of community, we empathize with the feelings of frustration sometimes expressed by teachers. We deeply respect the work of educators on the "front lines," working day in and day out to provide their students with opportunities to learn. However, we encourage all educators to use affirming language when speaking about students and their families, who truly want what is best for their children, even if their view of what is best differs from what we might expect.

CONCLUSION

Rural education research is often aligned with rural advocacy work, particularly when addressing issues of educational equity. The issues of serving gifted rural students—the forgotten many—especially those who attend schools which do not offer the same high level of instruction as schools in other places, are large and present unique challenges. However, efforts to achieve educational equity must have an underlying philosophy that *every* child deserves to learn *every* day in school. More specifically, our work in rural gifted education embraces the notion that all children deserve the opportunity to develop their potential and that we cannot ignore the responsibility to seek out and provide high-quality education to the gifted and talented students who are among the large body of students who attend rural schools in our nation. Our work offers one documented, successful strategy for approaching these issues. There

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are likely many others that already exist but have not been documented as well as many other creative ideas which could be translated into effective practice. The keys to success lie in attending to, adapting, and applying the practices that have been examined and shown to be effective (universal screening, local norms, carefully differentiated curriculum, attention to place, etc.). As important as it is to call attention to the ways rural students are not being served and to share specific examples of how they are being forgotten, it is equally necessary to name and elevate the solutions as they are found.

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KEY TERMS AND DEFINITIONS

Cluster Grouping: Placing identified gifted students together in one classroom to enable teachers to more easily facilitate differentiated instruction.

Growth Mindset: The belief that intelligence is not “fixed” but that it can increase through learning.

Local Norms: Comparing students’ test scores to those who live in the same place and thus have had similar opportunities to learn.

Place-Based Pedagogy: Teaching that draws from students’ connections to where they live to increase curricular relevance and motivation.

Rural School District: Per the National Center for Education Statistics, a district is considered rural when it is located more than 5 miles from an urbanized area (one that has a population of 50,000 or more).

Stereotype Threat: The danger in believing negative stereotypes about one’s own culture.

Universal Screening: Testing all students in a grade level for potential giftedness instead of relying on teacher referrals.