

KENTUCKY'S FUTURE: MINING UNTAPPED TREASURE CHILDREN AND YOUTH OF THE COMMONWEALTH WHO ARE GIFTED AND TALENTED

BENJAMIN FRANKLIN WISELY NOTED:

“GENIUS WITHOUT EDUCATION IS LIKE SILVER IN THE MINE.”

AN URGENT NEED

Before the Kentucky Education Reform Act (KERA), students who were gifted and talented were recognized as a group with special needs. Since 1978 and the first competitive gifted education grants, Kentucky legislators have recognized the importance of appropriate education for gifted students. Then in 1990 gifted children were designated a category of exceptional children in the Commonwealth. As defined in (KERA 157.200), these exceptional children can be identified in five areas: general intellectual aptitude, academic aptitude in a specific content area (e.g., mathematics, science), creativity, leadership, or in the visual or performing arts. Thus, since 1990, districts have been responsible for identifying and serving children in five areas of giftedness. Kentucky has created a strong infrastructure for educating students. KERA, coupled with the federal No Child Left Behind Act of 2001 (NCLB), pledged to provide appropriate educational opportunities to all students. Still, a gap remains between established KERA and NCLB goals and what happens daily in Kentucky schools, especially for children who are gifted and talented. The requirements are in place; now comprehensive implementation is needed.

You don't prepare a young man or woman to become a world class athlete by keeping him or her in regular gym classes and by not allowing him or her to compete against other youngsters who can provide appropriate levels of challenge.... You don't develop world leaders such as Martin Luther King, Golda Meir, and Mahatma Gandhi by having them practice basic skills over and over again or by reiterating mundane concepts that they can undoubtedly learn faster than all their schoolmates and, in some cases, even many of their teachers. Talent development is the 'business' of our field, and we must never lose sight of this goal.
Renzulli & Reis, (2005) National Research Center on the Gifted and Talented

To mine the future treasures that Kentucky's gifted and talented children possess, the Commonwealth must commit the tools to develop their extraordinary potential. Kentucky must fund gifted education at \$25 million so that the state's gifted students get the important educational opportunities promised them.

This position paper grew out of the urgent need for additional Gifted and Talented Education funding. Increased funding is crucial for:

1. Ongoing professional development for teachers,
2. Comprehensive identification of gifted students, and
3. Appropriate services for gifted students.

In China, 39% of all students are studying engineering, compared to just 5% in the United States.
The TechNet Innovative Initiative, 2005

We're at a crossroads. We still have the best system of higher education in the world, but the world is catching up. China graduates six times as many engineering majors as the U.S.; Japan and South Korea, four times as many.
Margaret Spellings, U.S. Secretary of Education, 2005

Innovation and economic growth for Kentucky are critically linked to educating the Commonwealth's children to their fullest potential, including those children who are gifted and talented. Kentucky ranked 47th out of the 50 states in the number of scientists and engineers produced. Kentucky dropped from 41st to 45th in the number of patents received (an indicator of innovative and creative ideas). Moreover, Kentucky dropped from 39th to 42nd for overall adaptation to The New Economy (The New Economy Index, 2002, the most recent information available). Kentucky can and must reverse this direction. Industry seeks locations with a qualified talent pool and an optimistic economic outlook; Kentucky needs to improve in those dimensions.

Everyone is looking for the same talent pool. If you don't pay attention to the pool, and you're not really building it up and encouraging the pool to grow, you'll end up with people out of the state coming to take jobs that could be offered to Kentuckians. Often I go out of state because I can't get the engineers that I need in Kentucky.
Wil Cooksey, Corvette Plant Manager, Bowling Green, KY

Mining the untapped treasure of Kentucky's gifted and talented young people is key to reversing this trend. Establishing a strong educational system for all children, including Kentucky's gifted children, will become the ace card for industries seeking new places to locate, qualified employees, and high quality educational opportunities for their employees' families. Kentucky's greatest resource isn't coal ... or horses ... or tobacco but our bright young people ... with minds capable of solving long standing problems in innovative ways. To hold them back because of inadequate educational opportunity is to hold Kentucky back. Kentucky's future depends upon developing this valuable resource.

Schools pay lip-service to the proposition that students should learn at their own pace; in reality, for countless highly able children the pace of their progress through school is determined by the rate of progress of their classmates. In the majority of our classrooms, an invisible ceiling restricts the progress of academically gifted students.
A Nation Deceived: How Schools Hold Back America's Brightest Students, 2004

The evidence for giving priority to gifted education is compelling:

- ¶ Funding gifted education in Kentucky has remained stagnant since 1987 (Kentucky Association for Gifted Education, 2005; KDE, 2005). Since that time, the salary of a teacher with a Rank II and ten years' experience has risen from \$23,350 to \$47,576.
- ¶ According to the KDE video *It's in Your Best Interest*, 20% of gifted and talented children scored novice or apprentice: a significant achievement gap between performance and potential.
- ¶ Children who are gifted and talented and who receive quality services have higher achievement test scores, higher high school graduation rates, and higher college graduation rates (Rogers, 2002; Kulik, 1992; Tieso, 2002; Colangelo, Assouline, & Gross, 2004).
- ¶ Gifted and talented elementary students have already mastered from 35-50 percent of the curriculum to be offered in five basic subjects before they even begin the school year (Reis & Purcell, 1993, *National Research Center on the Gifted and Talented*).

- ¶ U.S. students learn elementary topics in middle school (e.g., arithmetic, descriptive biology, and earth science), while international middle school students learn algebra, geometry, chemistry, and physics (*Trends in International Mathematics and Science Study [TIMSS]*).
- ¶ Tennessee Value-Added Assessment System data “suggests students at the highest levels of achievement show somewhat less academic growth from year to year than their lower-achieving peers” (Sanders & Horn, 1998).

1. ONGOING PROFESSIONAL DEVELOPMENT

A national survey of professional development practices in gifted education indicated that districts spend only 4% of their professional development budget on gifted education, including classroom practices.
Westburg, Burns, Gubbins, Reis, Park, & Maxfield, (1998)
National Research Center on the Gifted and Talented

Most classroom teachers and school administrators have very little or no training in meeting and identifying the unique learning needs of gifted students. Funding for on-going professional development for all Kentucky teachers is needed:

- ¶ Most students who are gifted and talented spend most of their time in regular classrooms, so all teachers working with them must recognize their advanced abilities and know how to modify the curriculum and teaching to challenge them.
- ¶ In February, 2005, Kentucky accreditation standards required preparation of preservice teachers in meeting the needs of a diverse population of students, including gifted and talented children. Professional development is needed to bring Kentucky’s 42,683 teachers to this standard.
- ¶ Research in 1993 indicated that most teachers use one lesson plan to teach a diverse group of students. Ten years later, the results are the same in spite of the fact that the one-size-fits-all approach to teaching is ineffective (Archambault, Westberg, Brown, Zhang, & Emmons, 1993; Westburg & Daoust, 2003).
- ¶ Gifted learners need to be served by professionals who have specialized preparation in gifted education (*The Gifted Program Standards*, 1998).
- ¶ Teachers play a vital role in the identification of students with gifts and talents. Teachers without training tend to overlook disadvantaged, underachieving, and culturally different gifted and talented students (Shack & Starko, 1990; Peterson & Margolin, 1997).

Increased funding is needed so that all Kentucky teachers have access to high quality professional development to mine the untapped treasures of gifted students.

2. COMPREHENSIVE IDENTIFICATION

Identification will remain a critical issue in developing the gifts and talents of young people as long as funding remains stagnant. Districts must have the financial resources to develop Kentucky’s natural resources – children who are gifted and talented from all five areas including those from underrepresented populations; otherwise, Kentucky loses treasures as they remain unmined.

Problems in identifying children who are gifted and talented plague the Commonwealth:

- ¶ Kentucky requires identification in five areas, but typically only the specific academic aptitude

and general intellectual ability are identified consistently across the Commonwealth. The areas of leadership, creativity, and the visual and performing arts are not adequately identified due to insufficient professional development and fiscal resources.

- ¶ Significant achievement gaps exist across all populations. Likewise, giftedness cuts across those same populations, including children who are economically disadvantaged, ethnically diverse, learning the English language (LEP), and/or managing a disability. These children are Kentucky's "unmined silver."
- ¶ Kentucky's minority gifted and talented young people comprise only 8% of those formally identified for services. Ideally identification should echo the 15.6% minority population in Kentucky schools (The Gifted and Talented End-of-the-Year Report, 2006-2007).
- ¶ Underidentification occurs also with those students from low socio-economic backgrounds. Fifty percent of Kentucky's students qualify for free and/or reduced lunch while only 8% of those identified as gifted and talented qualify for free and/or reduced lunch. (The Gifted and Talented End-of-the-Year Report, 2006-2007).
- ¶ Kentucky lacks expertise in identifying and developing talent in children with multi-exceptionalities (such as giftedness plus a learning disability, ADHD, or deafness). Of the total population of students with IEPs, 4.5% were identified for gifted services (The Gifted and Talented End-of-the-Year Report, 2006-2007).
- ¶ The number of K-3 children selected for Primary Talent Pool services represents a mere fraction (average 13%) of the expected 25% recommended by Kentucky Regulations (The Gifted and Talented End-of-the-Year Report, 2006-2007).

3. APPROPRIATE SERVICES

Gifted students don't look needy because their needs are created by their strengths. Reality finds these needs to be every bit as intense as the needs of other exceptional children.
Dr. Julia Roberts, Director, The Center for Gifted Studies, Western Kentucky University;
Named one of the most influential people in the history of the field of gifted education

All stakeholders must team to meet the individual needs of students. Just as precious metals may be mined in a variety of ways, so too are gifted children's talents developed in myriad services. Much must be taken into consideration when matching services to the child:

- ¶ *A Nation Deceived: How America Holds Back Its Brightest Students* lists 18 types of acceleration ranging from continuous progress to curriculum compacting, from early admission to subject-matter acceleration. Acceleration "is strongly supported by decades of research, yet the policy implications of that research are widely ignored by the wider educational community.... The research on acceleration is expansive and consistent; and we are not aware of any other educational practice that is so well researched, yet so rarely implemented."
- ¶ K-12 children require rigorous curriculum. Rigor is learning that is personally challenging to the learner - both in the depth of content and in complexity of thought. A single level of rigor will not challenge each student.
- ¶ "There is overwhelming evidence that gifted students simply do not succeed on their own" (DeLacy, 2004, p. 40).

- ¶ The gifted child's strength becomes the need that should drive the response from educators as the needs do in other programs such as Head Start or bilingual programs. The needs of gifted students differ significantly from other students. The needs arise from gifted children's strengths – their ability to learn at a significantly faster pace and their hunger for advanced, complex curricula.
- ¶ The brain changes physically and chemically when challenged (Sousa, 2002). Clark (2002) argues that “environmental stimulation strengthen(s) the brain at the cellular level, leading to enhanced ability to learn and create” (p. 50).
- ¶ Grouping must be done for instructional purposes for gifted children (704 KAR 3:285).
- ¶ Schools must provide a variety of service options at each grade level K-12 (704 KAR 3:285).

URGENT NEED CALLS FOR ACTION

Gifted children are an invaluable Kentucky resource whose gifts and talents must be recognized and then nurtured for their futures and for the sake of the Commonwealth. From this mine of bright innovative students come the creative and critical thinkers that Kentucky needs for economic growth in new directions. Providing gifted students with challenging educational opportunities to match their thirst for learning shows them that Kentucky cares for all students. Later, as adults, they will think of Kentucky as a good place to live and work. Kentucky will benefit tremendously from the creativity, drive, and intellectual capital these adults who are gifted and talented will contribute to the state.

Make the United States the most attractive setting in which to study, perform research, and commercialize technologic innovation so that we can develop, recruit, and retain the best and brightest students, scientists, and engineers from within the United States and throughout the world.

*Rising Above the Gathering Storm: Energizing and Employing
America for a Brighter Economic Future, 2005*

The state allocation for gifted and talented education acknowledges that gifted children have unique learning needs that must be addressed. The budgeted funds provide a beginning but in no way cover the full cost of professional development, identification, and appropriate services to Kentucky's gifted and talented young people. **The supporters of this white paper call for \$25 million in annual state allocations, a modest beginning but an important incremental step toward improving educational opportunities for Kentucky's children who are gifted and talented.** The increased funding should remain a separate categorical item in order to be identified and used specifically for children who are gifted and talented. Without such funding, providing and maintaining services for these children, improving performance levels of gifted students, and fully developing talents would become even more difficult. Kentucky is losing future leaders, scholars, creators, and performers, as their genius lies undiscovered like Franklin's “silver in the mine.”

It is against our country's character to hold people back and prevent them from pursuing their dreams. We all benefit when schools meet the learning needs of all children.

A Nation Deceived: How Schools Hold Back America's Brightest Students, 2004