

**THE STATE OF K-12 EDUCATION IN  
NORTHEASTERN PENNSYLVANIA  
AND BEST PRACTICES FOR  
IMPROVING QUALITY**

JOINT URBAN STUDIES CENTER

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# JOINT **UrbanStudies** CENTER

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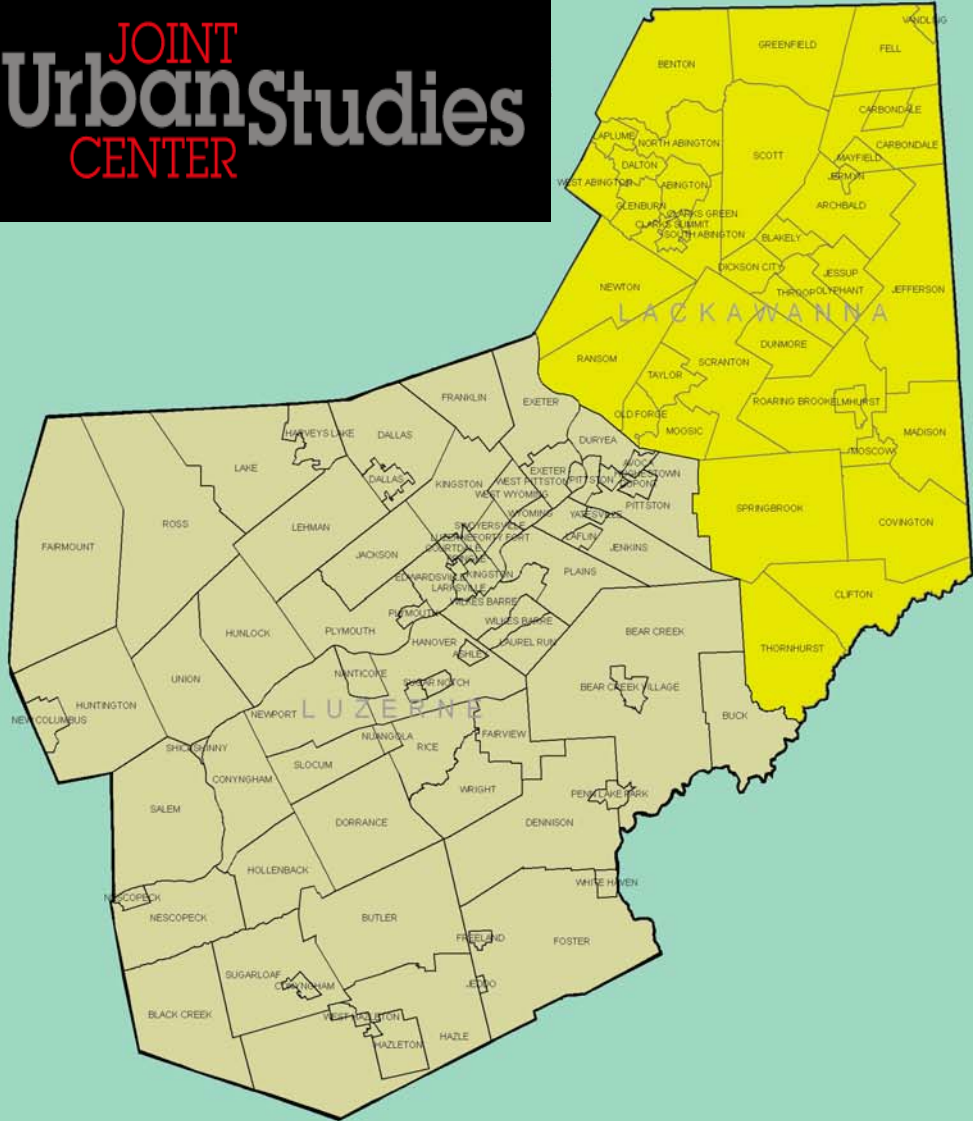
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## **I. EXECUTIVE SUMMARY**

The quality of K-12 education across the United States has undergone more scrutiny over the past five years than ever before. From the federal government to CEOs of major corporations to the nation's governors--all have been involved in reviewing research and trying to develop new initiatives to (i) increase the number of youths going on to higher education, (ii) increase the quality of public education to compete globally, and (iii) address the needs of children whose learning is affected by a number of social, geographical, and personal difficulties.

Researchers estimate the "optimum learning window" begins to close between the ages of 10 and 12. This means that the educational process occurring between Pre-K through sixth grade lays the foundation for a child's future. The more intense the training in fundamentals, language, and music preceding ages 10-12, the stronger the student will be in the following years.

The subsequent report analyzes and presents the current status of K-12 education in the Commonwealth of Pennsylvania, in order to clarify some of the strengths and weaknesses. The geographic area of emphasis is Luzerne and Lackawanna counties, with attention focused on the current rank, practices, and new initiatives implemented to improve the public education system. Further, new initiatives that improve the quality of education, recommendations, and strategies are presented. Finally, the No Child Left Behind (NCLB) legislation is examined and specific themes discussed, which apply to Pennsylvania's public education system.



More and more, it is recognized that a strong K-12 system is not only a desirable quality of life factor for residents and businesses deciding to locate in a specific area, but academic performance is also tied to the economic health of a community and/or region. Ironically, educational performance is solely defined by standardized and statewide tests.

This paper emphasizes that the "education triad," comprised of administrators/policy makers, teachers, and parents, must assume responsibility for ensuring quality education. Administrators and policymakers must create an environment with consistent standards for each subject and each grade level. Teachers must be educated, trained, and re-trained, undergoing continual professional development to keep pace with current events and technology. Teacher performance, not tenure, should determine salary and continued employment. Parents must emphasize the importance of education and must reinforce the importance of studying and reading. Also, parents must dedicate time to coaching and challenging their children. There is no reason why two children in the same school, same grade, and different classrooms should be learning different things. Subjects other than reading and math should not be sacrificed in order to meet reading and math proficiencies.

Strong local and regional economies possess a high degree of college educated individuals, as well as a strong K-12 public education system. Higher per capita income is directly tied to education. The more educated an individual, the more income they will likely earn. This demographic group chooses where to live based on a number of quality of life factors, including a competitive K-12 public school system. Combine these variables in the region and you will find a desirable place to live where cities have the capacity to provide sufficient public services and public safety.

## II. THE STATE OF EDUCATION

### *No Child Left Behind*

The *No Child Left Behind Act of 2001* (NCLB) was signed into law by President Bush on January 8, 2002. The Department of Education reviews and reports on the policies mandated by NCLB annually. The legislation is described as a “blueprint” of what should be done to improve the nation’s public education in primary and secondary schools, and it details each priority it was created to accomplish. Each priority involves important stipulations that the federal government, as well as the state and school districts, must follow and enforce to succeed. Details of the contents of the NCLB are included in Appendix I.

### *Pennsylvania*

Pennsylvanians have often worried about the effectiveness of K-12 education their children receive. Pennsylvania’s constitution assigns the overall responsibility of public education to the state government. School districts, however, maintain local control. This causes significant confusion and conflict throughout the State. Nonetheless, Pennsylvania has an opportunity to develop policy to make its K-12 public education system more competitive.<sup>1</sup>



The Commonwealth’s K-12 public education system is presented through the results of a number of studies completed by both public and private entities. One study conducted by the Pennsylvania Department of Education, and which is featured in its academic report, is the 2004-2005 Academic Achievement Report. The report is part of a policy previously identified as the Elementary and Secondary Act of 1965, but which is now known as the NCLB, as noted above. Currently, NCLB increases the State’s responsibility to improve educational measures each year (Pennsylvania Department of Education 2005).

One measure is the Adequate Yearly Progress (AYP) Report, which is based on the National Assessment of Education Progress (NAEP), also known as the Nation’s Report Card, which measures education improvement on several levels. The study takes into account four key variables:

- Overall student attendance, with a target rate of 90% or any improvement over the prior year;
- Schools must attain 45% in the mathematics assessment, and 54% in the reading assessment;
- At least 95% of the student population in schools must take the test; and
- Schools are required to test more than 40 students in each subgroup, such as race.

If a school or school district does not meet AYP standards, the State must take corrective action.<sup>2</sup> Currently, Pennsylvania ranks sixth in the nation for having the highest number of schools in need of restructuring or for failing to make yearly progress for five years.<sup>3</sup>





Another difficulty with Pennsylvania's standardized tests is that they are administered in March. Other states administer the tests at the end of the year, providing students with additional time to learn the standards.<sup>9</sup>

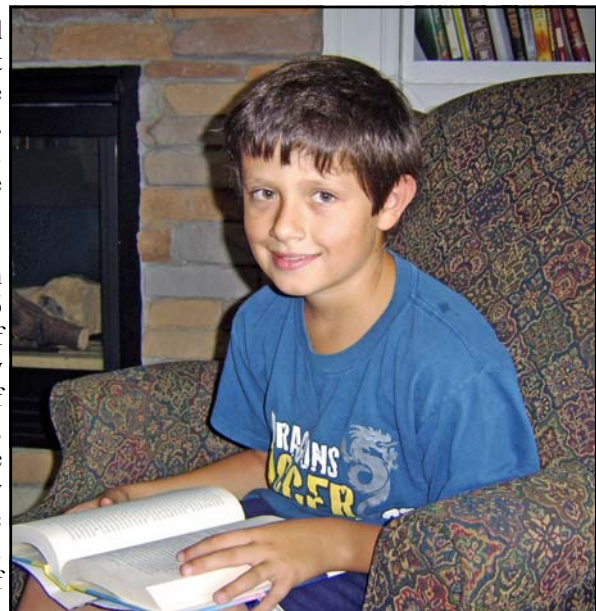
Standard & Poor's (S&P) established a research division and S&P service focusing on K-12 education — [www.schoolmatters.com](http://www.schoolmatters.com). Pennsylvania is one of the states on which S&P initially conducted its comprehensive research of K-12 education. Research for the 2003/2004 school year provides the baseline. In Lackawanna County, of 27,344 students, the average economic disadvantaged rate was 23.3%. The economic disadvantaged rate is determined measuring the number of families with a yearly income below the national poverty level. For example, according to the U.S. Census Bureau, a family of four (two parents and two children) are at the poverty level if they earn \$18,660 or less.<sup>10</sup> Students of such families attained an average reading proficiency of 66.9% and an average math proficiency of 60.0%.<sup>11</sup> By comparison, Cumberland County most closely resembles the statistics and population of Lackawanna County. Cumberland County has a total student enrollment of 28,417, with an economic disadvantage of 12%, a difference of 11.3% from Lackawanna County. Cumberland County has a reading proficiency of 71.9% and a math proficiency of 64.16%. Lackawanna County has a -5% for reading proficiency and a -4.2% for math proficiency, compared with Cumberland County<sup>12</sup> (Standard & Poor's. 2004). (See Table 1).

*Table 1 - Lackawanna and Cumberland County Education*

County	Reading Proficiency	Math Proficiency	Economic Disadvantage
Lackawanna	66.9%	60.0%	23.3%
Cumberland	71.9%	64.2%	12.0%
<i>Differential</i>	-5.0%	-4.2%	11.3%

Luzerne County schools have shown to score differently from Lackawanna County schools. Luzerne County consists of 11 school districts and 58 individual schools — five of which failed in achieving AYP standards. Crestwood, Dallas, Greater Nanticoke, Hanover, and Lake-Lehman, Northwest, Pittston, Wilkes-Barre, and Wyoming school districts have either met AYP standards or made progress over the prior year. The Hazleton and Wyoming Valley West school districts include schools that are delinquent in their achievements. Those schools include Heights Terrace Elementary, Hazleton Area High School, and schools in the Wyoming Valley West School District. They are considered to be delinquent in one of the categories of the AYP.<sup>13</sup>

According to the S&P study for Luzerne County, in 2003/2004 school year, there were a total of 40,016 students with an average economic disadvantage rate of 28.1%. Students attained an average reading proficiency rate of 68.1% and an average math proficiency rate of 57.7%<sup>14</sup> (Standard & Poor's. 2004). By comparison, Westmoreland County most closely resembles Luzerne County's statistics and population. Westmoreland County has a total student population of 55,767, with an economic disadvantage rate of 27.8% - a difference of -3%. Westmoreland County has a reading proficiency rate of



75.8% and a math proficiency rate of 63.2%. Luzerne County's difference is -7.7% in reading proficiency and -5.5% in math proficiency from Westmoreland.<sup>15</sup> Although Westmoreland County has a higher economically disadvantaged student population, the county exceeds Luzerne County in reading and math proficiency. (See Table 2)

*Table 2 - Luzerne and Westmoreland County Education*

County	Reading Proficiency	Math Proficiency	Economic Disadvantage
Luzerne	68.1%	57.7%	28.1%
Westmoreland	75.8%	63.2%	27.8%
<i>Differential</i>	-7.7%	-5.5%	0.3%

A number of private and State organizations conduct research on national and state public education and provide informational findings to government organizations. According to a private sector organization's website at [www.achieve.org](http://www.achieve.org), Pennsylvania's data profile as a whole is ranked above the national average. In some categories, Pennsylvania scored higher than or equal to the top state, Massachusetts. For example, students who graduate from high school on time total 77% in Pennsylvania, compared with 76% in Massachusetts. Pennsylvania scored higher than the national average in the following categories: students who immediately enter college (47%); students who are still enrolled in their sophomore year (37%); and students who graduate from college on time (28%). Since 1992, Pennsylvania has shown an overall improvement of 6.5%.<sup>16</sup>

S&P's analysis of Pennsylvania shows the following statewide proficiency statistics:

- In reading proficiency for 2004, Grade 5 had 63% proficiency, Grade 8 had 68% proficiency, and Grade 11 had 61% proficiency.
- In math proficiency for 2004, Grade 5 showed 61% proficiency, Grade 8 had 58% proficiency, and Grade 11 had 49% proficiency.<sup>17</sup>

In addition, S&P's research provides the top "out-performer" in each of the counties, as well as the individual school districts. Although Luzerne and Lackawanna Counties did not out-perform in the past two school years, two schools stand out. In Lackawanna County, Scranton School District has previously out-performed due to high proficiencies in reading and math percentages. In Luzerne County, Wyoming Area School District has previously out-performed despite its high economically disadvantaged student population.<sup>18</sup> Statistically, just two of 104 schools (1.9%), out-performed in reading and math proficiency. It is evident that Luzerne and Lackawanna County school districts as a whole must work to increase proficiency in these areas.



### **III. APPROACHES TO IMPROVING QUALITY OF EDUCATION**

#### **Teachers**

##### ***Hiring***

Pennsylvania's teachers must complete a state-approved teacher education program, which includes student teaching or intern experience; a certification test; and application materials documenting that all certificate requirements have been met. A re-certification process is in place and continuing education requirements are invoked every five years.<sup>19</sup> Pennsylvania also requires that subject area majors obtain an initial license for secondary education, but not middle school education. The State, however, does not stipulate the amount of coursework that constitutes a major. State teacher salaries average \$52,640, with starting salaries at approximately \$34,140. Pennsylvania does not institute a pay for performance program based on teachers producing growth in student achievement, nor does it provide teachers with recruitment, retention, signing, housing, or education assistance. The State does not require or finance any mentoring, but does have an induction program; further, it does not provide incentives for National Board certification. Pennsylvania does finance professional development for teachers, but does not provide set aside time for such. For second stage certification, the only evaluation method is that of observation evaluates, which are not tied to student achievement.<sup>20</sup>

Pennsylvania has in place an intern certification program for professionals who want to teach at a later point in their careers. The program includes similar education requirements and three year internships.

In a research study sponsored by the National Center for Education Statistics, from 1987 to 1994, the percentage of (Pennsylvania) public school districts requiring specific credentials and the passage of specific tests showed only slight gains in increasing standards for teacher hiring. Less than half the schools require passage of a State test of basic skills, passage of State test of subject knowledge, and passage of the National Teachers Examination. Only 83% of schools require certification. Further, 72% of schools require successful completion of a state-approved teacher education program and only 66% require a college major or minor in the respective field taught. Survey data covers 15,000+ school districts in the U.S., and notes that school districts in the southern U.S. had more certification and teaching requirements than any other geographic region.<sup>21</sup>

##### ***Evaluation Methods***

Evaluation methods are used in almost every profession, with teachers being no exception. While it is widely agreed that a student's performance is largely based on his/her teachers' abilities, a teacher's effectiveness includes a number of factors. Student ability, teaching methods, curriculum, scheduling, classroom size/accommodations, and other conditions impact how well a teacher teaches and how well a student learns. Skill and talent, combined with the appropriate education and training, certainly bear upon on a teacher's success.

Surveys, peer review, student achievement, professional activity, teacher tests, school improvement, and observation are proven tools that can be used to: seek out, document, and acknowledge the good teaching that already exists. In addition, these tools can provide a mirror for teachers and audiences (parents, legislators) to see the good work accomplished.

When administered appropriately, these tools place the teacher at the center of the evaluation activity. More than one person should judge teacher quality and performance. Multiple data sources should be utilized to arrive at judgments about teachers, including: student reports, parent reports, peer review of



materials, teacher tests, documentation of professional activity, systematic observation, pupil achievement, successful action research, participation in school improvement, administrator report, and data/characteristics unique to the individual teacher.

In many professions, evaluations are completed merely to document performance relative to pay increases. In all professions, however, these documents and processes could be used for many purposes, such as recognizing good teaching and utilizing the results of teacher evaluations to encourage personal professional dossier building.<sup>22</sup>

Evaluating teachers can create (for a school district) awkward situations. To be fair, evaluation systems must include real opportunities for teachers to improve their performance and also weed out those who ultimately can't meet the district's standards.

In Maryland, the *Montgomery County Public Schools* (MCPS) chooses to utilize its teacher evaluation program in a wider-reaching approach called the Professional Growth System. This system gives teachers a hand in the professional development process. The process includes extensive teacher learning and evaluation, with its focus on professional growth. A Development Specialist (i.e., a teacher in each school) works with the administration to develop the training component and serves as the staff development liaison. Each school allocates specific time to release teachers from school for job-embedded professional growth activities.

Planning for and development of the Professional Growth System in MCPS required great thought and care over a period of years. In 1997, the Montgomery County Board of Education implemented changes based on recommendations from a task force of MCPS and Montgomery County Education Association (MCEA) representatives. MCPS hired consultants from *Research for Better Teaching* (RBT) in Acton, Massachusetts, to create a new teacher evaluation system that would halt "one-size-fits-all" teacher evaluations. The consultants were tasked with developing a system to differentiate among teachers deemed excellent, those who met MCPS standards, and those who were marginal or ineffective.



The district's teachers union and administrators' association collaborated with RBT consultants to work out details of the new system throughout the development phase. Their overarching goal was to improve the quality of teaching and learning by supporting teachers in their professional growth.

As part of the system, new teachers and underperforming teachers work with "consulting teachers" (CTs). CTs have at least five years of total teaching experience, demonstrated mastery-teaching skills, have knowledge of peer coaching, and are proficient writers. They show empathy for other teachers and understand the supporting role they play for new and underperforming teachers.

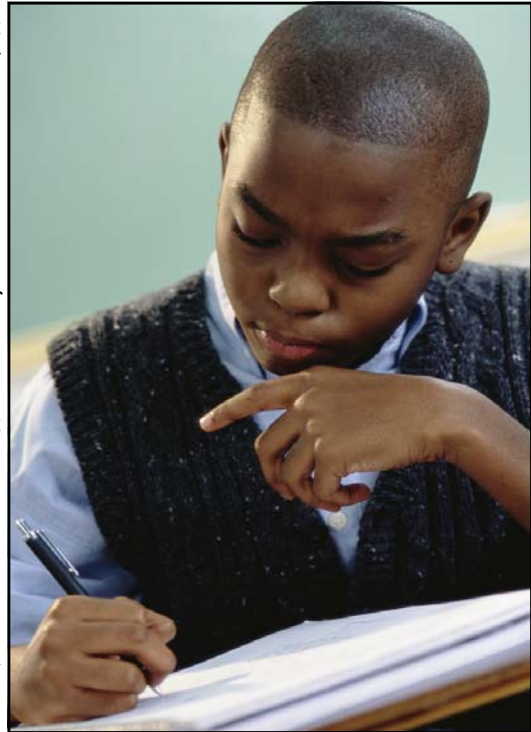
Feedback and support from CTs helps improve new or underperforming teachers' instructional skills. CTs work with such teachers to identify strengths and weaknesses. Through modeling, observation, and feedback, CTs attempt to improve the mentored teacher's practices. The teacher receives materials and helps in developing materials to enhance classroom curriculum. Management strategies -- both physical layout and classroom routines and procedures -- are learned and help the teacher better his/her classroom technique. Through the process, CTs also learn and the increased skills in observation enhance their teaching when he/she returns to the classroom three years later.

Under Maryland's newer guidelines, a probationary teacher is not renewed and a tenured teacher is dismissed when the teacher demonstrates little or no advancement in instructional skills after one year of CT support. Based upon evidence and documentation from the CT, peer assistance and a review panel of six teachers and six administrators, recommended by their respective teachers' unions and appointed by the superintendent, makes the recommendation. The basic standards of performance are concepts from *The Skillful Teacher: Building Your Teaching Skills*, a book synthesizing current thinking on the effectiveness of matching teaching strategies to student needs.

Whether the Professional Growth System works will ultimately be measured by student performance, however it's too early to use it as a benchmark. So far, only anecdotal feedback on the system exists. Such feedback has been largely positive.<sup>23</sup>

### **School Boards** **Governance**

NCLB has increased the role of state involvement in school districts' daily operations. This involvement has created some tension and the extent to which this will evolve is currently unknown.



In 2003, The Education Policy and Leadership Center (EPLC) launched a school board governance study. The purpose of such a study was to improve the effectiveness of school boards and increase the number of citizens who are motivated and prepared to serve them. The study made the following recommendations:

- Delineate board and superintendent roles in state law;
- Boards should focus on student achievement and exercise their authority through planning, policymaking, monitoring, communicating, and advocating. The District Superintendent should have the responsibilities of a CEO and the authority given to them to carry them out;
- Board members should be required to undergo formal orientations before assuming the position, as well as ongoing professional development;
- Increase board terms to six years, with one-third elected every two years; and
- Elected officials, business, and community leaders should acknowledge the importance of school board service, recruit more qualified individuals to run for the office, and encourage more citizen participation.<sup>24</sup>

In the 1950s and 1960s, it was largely considered a civic responsibility to serve on a school board. Employers took this into consideration during reviews and promotions and were flexible about participation. Today, many individuals shy away from civic involvement, therefore the field of interested and qualified individuals is often limited. Consequently, this impacts the diversity and quality of school board members. The nature of running a school board is also more complex than it was 40 or 50 years ago, therefore the candidate's experience and skills are critical components of that person's ability to fulfill the role. As with any position, formal orientation and training are critical.

EPLC's recommendations appear to be based upon a business model of operation. Empower the leadership, have independent boards provide guidance, reduce bureaucracy and focus on delivery of a quality product. This model has applicability in another area of this report - that being performance based measurements for teacher incentives - discussed in detail later.

## **Structural Changes**

### **Buildings**

The physical structure of schools has changed throughout the years and varies coast to coast. As with any public building, while the façade should complement the respective neighborhood or area, the inside is more important. Over the past five years, changes in technology and teaching styles have changed dramatically. While enrollment and resources change, no one wants to replace school facilities - especially since they tend to outlast trends. New designs are being tested; one such model recently opened in Connecticut which focuses on the learning portions of the buildings - known as “pods.”



The arrangement of classrooms, offices and support spaces in distinct pods serves the pedagogical needs of the staff. Pods are entered from the main hallway, into smaller corridors that lead directly into classrooms, labs, seminar rooms and offices. This arrangement is shown to reduce distractions - better enabling both teachers and students to focus on the tasks at hand.<sup>25</sup>

Another trend is in creating small schools. This model provides several intertwined advantages for districts. With more manageably-sized student populations and the resulting closer relationships formed between students and teachers, small schools have shown improvements in student achievement. Most small schools are created as a slate of choices, allowing families to choose a pedagogy and subject focus that best suits the student. As important, creating a new school bypasses existing dynamics.<sup>26</sup>

While smaller neighborhood schools were in place through the 1980s (before regionalization took place), such schools were not particularly focused on a specific area of specialization. General education was the key. Neighborhood schools allowed for walking or parent transportation, as opposed to a bus system, which reduced a

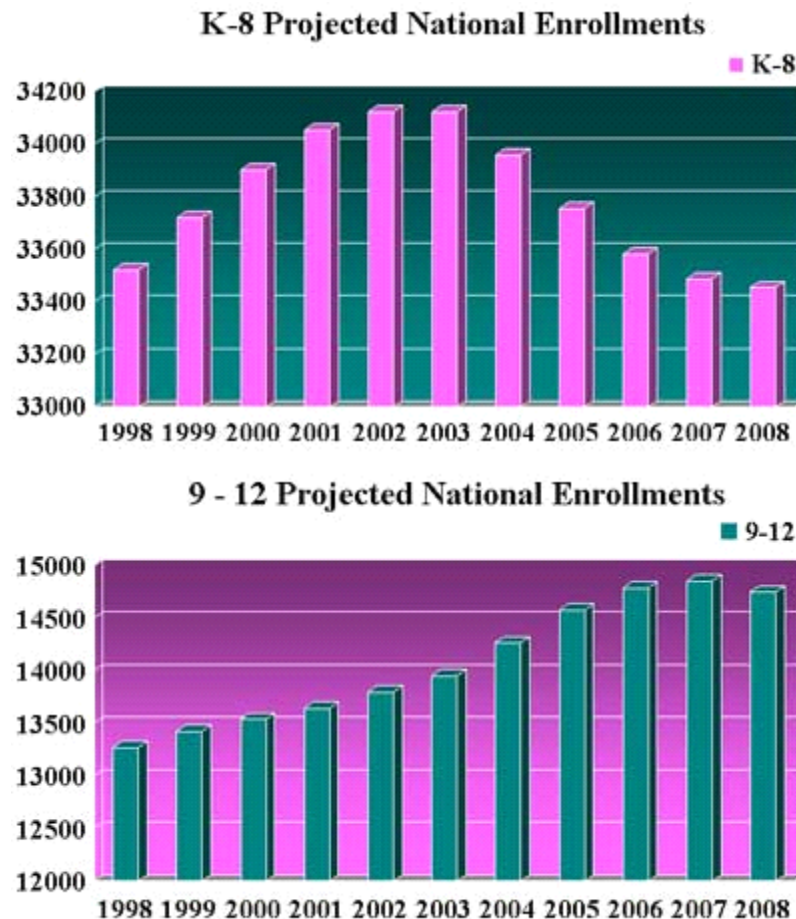


school's costs, scheduling, and administrative functions. However, by the early 1990s, the quality of these structures was compromised and it was more cost effective to build larger, regional schools.

To open new schools, districts in Chicago shut poorly-performing schools, bolstered by data that backed such decisions and political support for hard choices. The trend isn't widespread, but it is growing. Every year since 2001, when Superintendent Arne Duncan took office at Chicago Public Schools, the district has closed schools (often over howls of protest from the teachers' unions and

community activists). Last year, Chicago announced Renaissance 2010 (Ren10), a plan to open 100 new schools over the next five years; a record 18 launched in the 2005-06 school year alone. Since Ren10 will require more school closings, the district now has policies in place on how to successfully open and close a school.<sup>27</sup>

Enrollment is a key factor in determining facility needs. The charts below project enrollment in K-12 public schools through 2008.



*Source: Design Share:  
The International  
Forum for Innovative  
Schools*

Planning for the long-term, and a somewhat unknown future, requires an adjustment in thinking. Nationally, schools planned today exhibit the progression of development, which may be used to characterize degrees of change from traditional practices. The progression identifies five stages of restructuring, from the most traditional (#1) to the most radical (#5), which may result in the decision to not build a new school. The sequential diagram below expresses the way that a school can be viewed as a point on a continuum, and that, over time, it may evolve from one point to another. Some aspects of progression may be highly controversial (virtual learning), while others, such as project learning and teacher planning centers, are likely appropriate for most schools at some future point. Even if progressions are not imbedded in today's teaching practice, the prudent planner would be wise to anticipate their integration in the near future. Preparing for such a possibility requires "futurist thinking."<sup>28</sup>

### Schedules

#### ***Four-Day School Week***

Some communities across the nation have instituted a four-day school week, instead of the traditional five - eliminating either Mondays or Fridays; this change has proven to be popular in rural areas. The concept was first

instituted as high fuel costs in the 1970s drove lawmakers to find ways to cut costs.

Legislation had been passed by the Arkansas legislature that permitted school districts to implement a four-day program, so long as the total number of hours students attended school did not decrease. Instead of attending school for the traditional 178 days per academic year, students in districts that implemented the program were required to attend only 142 days.

Under the traditional academic year, the Saratoga School District, in Arkansas, was a small school district (under 300 students) that exhibited low test scores, increased and unfunded state mandates and a tax increase. As the first Arkansas school district to implement the four-day week (in 1997), Saratoga increased the school day by 90 minutes—including its kindergarten program. The school week now runs Tuesday through Friday, with teachers continuing to work on Mondays. Tutorials are offered for students who need additional instruction.

Although test scores did not increase in the first year of implementation, overall morale was higher, student and teacher attendance increased, and extended instruction time allowed for more focused instruction in the regular class day.<sup>29</sup>



Merryville High School, in Louisiana, a K-12 school with 170 of its 550 students in high school, also implemented the four-day school week. In addition, the school switched to a block schedule – allowing for fewer, but longer, classes per day. Since making the changes, the school increased its ACT scores from 18.7 to 20. Grades have also improved significantly and more students in junior and senior high school have become honors students.

Similar to Saratoga, teachers in Merryville reported less absenteeism, fewer disciplinary issues, and increased teaching time – resulting from a reduction in time lost through transition from class to class. Merryville students now attend school 155.5 days per year, with the school day running from 7:45 a.m. to 3:45 p.m.<sup>30</sup>

Midland School District, also in rural Louisiana, instituted the four-day week by adding an hour to each school day. According to Clyde Briley, principal of Midland High School, "Student morale and behavior has improved." Briley believes that the four-day week increases student motivation to work hard and do their best in order to have additional time off to do things that students like to do. In the first year of implementation, grade point averages increased considerably and failing grades dropped by 50%.<sup>31</sup>

Proponents of the four-day school week list numerous benefits, including:

- School districts save money on transportation costs, utilities, substitute teachers, and lab equipment
- Student morale is boosted and attendance increases
- Personal appointments for staff and students may be scheduled on the day off
- Schools utilize one day a week for teacher training
- Teachers are afforded additional instruction time
- Work quality increases
- Teachers have needed preparation and professional development time on the fifth day
- Tutoring opportunities are available on the fifth day for students in need of such
- Students have time for extra-curricular activities and part time jobs

Opponents stress the following points:

- Time is wasted when teachers do not take advantage of class time
- Parents have difficulty with childcare
- Student achievement is overlooked for financial benefits
- There is a loss in continuity of learning with a three day break
- Long days have an adverse impact on young children
- Earlier start times negatively impact high school students



### ***Year Round School***

Year-round schooling is an alternative method of providing education, and it is often implemented in schools or school districts that are experiencing rapid increases in student population. In fact, limited space and financial constraints are often the primary motivators for a change to year-round schooling. However, some educators convert to year-round schedules because of a belief that year-round schooling may increase opportunities for, and improve the achievement of, teachers and students. Whatever the reasons for moving to a year-round schedule, it is important that policymakers, administrators, teachers, parents and students understand the concept and effects of such, specifically with regards to levels of student achievement.

Year-round schooling is a "reorganization of the school calendar into instructional blocks and vacations distributed across the calendar year so that learning is continuous throughout the year." Students are divided into groups, or tracks, which share the same schedule rotation. The two types of year-round schedules are single-track schedules and multi-track schedules.

Single-track schedules accommodate the entire student population. Students follow the same calendar with the same vacation periods; that is, all of the students are in school or on vacation at a given time. Multi-track schedules organize students into groups, with staggered instructional blocks and vacation periods. While one track is on vacation, another uses the vacationing track's space, thereby increasing the school's capacity. It is important to note that staggered rotation of multiple tracks enables schools to combat overcrowding.

Whether on a single- or multi-track schedule, students attend school for a prescribed length of time and then have a vacation, or intersession. Some of the more common schedule configurations are:

- 45 days on, 15 days off
- 60 days on, 15 days off
- 60 days on, 20 days off
- 90 days on, 30 days off

Proponents site the following points in support of year-round schools:

- A growing school district may more efficiently use its facilities, and thereby eliminate the need to pass bond issues to provide for increased enrollment.
- Overcrowding in the classroom may be reduced.
- Teachers may spend less time reviewing material they have previously taught.
- Remediation courses may be offered in various subjects during intersessions, as opposed to lengthy repetition during the regular session, which often puts certain students behind their classmates.
- Intersessions may allow for student enrichment activities.
- Performance may improve, especially if students are from a home environment that does not reinforce learning.
- There may be opportunities to implement flexible staffing patterns and alternative salary and benefit

programs, and better utilize part-time staff.

- Students' enthusiasm and motivation for learning may be increased.
- Teacher and student absences may be lowered.
- Teachers may have the opportunity to earn extra income by teaching during intercessions.
- Teachers and students may experience a decrease in burnout and fatigue as a result of the shorter instructional cycles.
- Schools may experience less vandalism and fewer incidents of juvenile delinquency.
- Communities may save money and increase the school capacity.

Opponents site the following complications as grounds for challenging the concept of year-round schools:

- The initial cost of setting up a year-round program may be high. Renovations, such as extra storage space and air conditioning, are often necessary in order for the program to run smoothly.
- Some savings associated with year-round programs may be offset by increased district costs, such as increased office support or additional teaching staff.
- The schedule may provide less time for large-scale cleaning and maintenance.
- The scheduling process itself is quite complex and needs careful management (i.e., assigning students to tracks can be very difficult since summer months are often the least popular).
- Unless the school is using a single-track plan, each school function that occurs, including parent conferences, faculty meetings, and open houses, must be done continually since a segment of the school population is always gone.
- Careful coordination with district specialist services (i.e., speech therapists, occupational therapists, or other consultants) is necessary, as most of them do not accommodate work with students during the summer.
- Parents may become frustrated if their children do not have common vacation times.
- There may be fewer opportunities for the entire faculty to work together to improve education, and teachers may find it more difficult to use the summer break to pursue advanced degrees.
- Students may be unable to interact with friends from other schools.
- Problems may occur with child-care arrangements during scheduled breaks.
- Athletic and extracurricular schedules may conflict with multi-track schedules; some students may not be able to participate unless they attend school during all sessions.
- Smaller high schools and middle schools find certain school activities, such as band, glee club, and debate, suffer unless the district is willing to hire additional teachers.
- There is no cost advantage to a multi-track system if the tracks aren't balanced.

Comprehensive research to date is inconclusive regarding the degree to which year-round schooling affects student achievement. Essentially, results vary from classroom to classroom. In some cases, year-round schools have resulted in increased student achievement. In other instances, levels of student achievement have decreased. The only firm conclusion is that summer learning loss is real, it is severe, and needs resolution.<sup>32</sup>

Johns Hopkins University conducted research on K-12 education and summer learning loss. According to its research, summer learning loss occurs because of the current 180-day consecutive structure used by most schools in the U.S. This structure allows for a three-month break over most of the summer months of June, July, and August. It is reported that children may lose months of grade level equivalency in both reading and math, which must then be reviewed by teachers in the fall of the following school year. There is also the concern over how the school's building is used throughout the school year, when it lies dormant for the summer break. Johns Hopkins University's researchers have suggested that restructuring the 180-day school schedule is imperative if the U.S. is to attempt to improve public education and communal concerns.<sup>33</sup>

One way to address summer learning loss is to spread the normal summer vacation across a 12-month period - creating numerous shorter breaks throughout the year. Other findings by Stenvall and Stenvall, of the National Association for Year-Round Education, elaborates on similar research on year-round schooling. Such research

found that students in modified school year structures out performed those in traditional structures. However, the research also indicated that those students who have a higher percentage of economic disadvantage and limited English-proficiency generally performed poorer in the modified curriculum.<sup>34</sup>

Additionally, it is difficult to determine the change in the cost of education in a year-round school. For multi-track schools, capital expenditures (i.e., building costs) are reduced under year-round education. Conversely, the impact on operating expenditures (i.e., personnel expenses, electricity costs, etc.) is less certain in both single- and multi-track schools. Even in multi-track schools that do not achieve savings in operating expenditures, the magnitude of the capital cost savings far outweigh modest increases in operating expenses. However, cost savings in single-track schools are more questionable.

In essence, the connection of year-round schooling to increased student achievement is debatable. And although year-round school is not "the solution" for all of a school district's problems, it is an idea worthy of consideration for those districts dealing with overcrowding, declining tax revenues, and a lack of new school buildings.<sup>35</sup>

State-level, year-round education policy does not have to be in place before a local school district can implement year-round schooling. For a variety of reasons, however, twenty-two states (not including Pennsylvania), have enacted year-round school legislation.

### ***Block Scheduling***

Some districts have experimented with block scheduling. Block scheduling results in a four day block schedule followed by a one day "regular" schedule. After an evaluation of the block schedule, staff provide input and the schedule is readjusted. Block schedules provide students and teachers the opportunity to meet four times a week, with an extended class period once a week for in-depth instruction and projects. Time is incorporated for extra help, make-up work, and the completion of unfinished assignments.

The benefits of block scheduling are:

- In depth instruction
- Flexibility for effective use of class time
- More opportunities for hands-on learning
- Time for guided practice of new material
- Additional opportunities for cooperative learning
- Collaboration in problem-solving
- Active learning
- Judicious use of lecture format
- Increased student interaction with peers and teachers
- Student/teacher conference time
- Utilization of multiple intelligences<sup>36</sup>

### **Charter Schools**

Charter schools are nonsectarian public schools of choice, which operate autonomously and free from many of the regulations applicable to traditional public schools. The "charter" establishing each school is a contract of performance detailing the school's mission, program, goals, students served, methods of assessment, and benchmarks to measure success. The length of time charters are granted to contracted schools varies, however most are granted for three to five years. At the end of the contract period, the entity granting the charter — usually a local school board or state Board of Education — may renew the school's charter. Charter schools are accountable to their sponsoring governmental body to produce positive academic results and adhere to the charter contract. The basic concept of charter schools is that they exercise increased autonomy in return for accountability. They are accountable for both academic results and fiscal practices to the sponsor that grants them, the parents who choose them, and the public that funds them.<sup>37</sup>

The charter school concept is one of many reform ideas to improve the nation's public school system, including

alternative schools, site-based management, magnet schools, public school choice, privatization, and community-parental empowerment. The term "charter" most likely originated in the 1970s, when New England educator Ray Budde suggested that small groups of teachers be given contracts or "charters" by their local school boards to explore new approaches. Albert Shanker, former president of the American Federation of Teachers, publicized the idea, suggesting that local boards could charter an entire school with union and teacher approval. In the late 1980s, Philadelphia initiated a number of schools-within-schools and called them "charters." Some were schools of choice. The idea was refined in Minnesota, where charter schools were developed according to three basic values - opportunity, choice, and responsibility for results.<sup>38</sup> In 1991, Minnesota passed the first state wide charter school law, with California following suit in 1992.<sup>39</sup> By 1995, 19 states had enacted laws allowing for the creation of charter schools, and by 2003 the figure increased to 40 states, Puerto Rico, and the District of Columbia.<sup>40</sup>

Charter schools are clearly one of the fastest growing innovations in education reform and policy, experiencing bipartisan support from governors, state legislators, and past and present national secretaries of education. In his 1997 State of the Union Address, President Clinton called for the creation of 3,000 charter schools by the year 2002.<sup>41</sup> Today, there are more than 3,600 charter schools serving more than one million children across the country.<sup>42</sup> In the 2005-2006 school year alone, 424 new charter schools opened throughout the U.S. — an increase of 13% over the prior year.<sup>43</sup>

Charter schools in Pennsylvania were first established by Act 22 in 1997 and amended in 2002.<sup>44</sup> As of the 2005-06 school year, there were 115 charter schools operating in Pennsylvania, with some 52,000 (or 3% of the state's public school population) students enrolled.<sup>45</sup> The Commonwealth also has eleven cyber-charter schools, where students learn primarily through the Internet. These schools, which are public schools open to any student in Pennsylvania, have a combined enrollment of more than 10,000 students statewide.<sup>46</sup> Pennsylvania also allows an unlimited number of charter schools to be established and its term of charter is five years. Local school boards approve charter agreements and if denied, an applicant may appeal to the state appeals board. Funding for the schools follows students, based upon average district per-pupil budgeted expenditure of the previous year. Depending on the district, charter funding is 70-82% of a district's per-pupil revenue and charters receive additional funding for special needs students. Charter school teachers may also operate and negotiate as a separate unit and execute collective bargaining agreements separately from other district teachers. Charter schools may limit enrollment to a particular grade level or area of concentration, and all such schools shall participate in the Pennsylvania state assessment system and all state testing.<sup>47</sup>

A recent 2006 report entitled, *Key Issues In Studying Charter Schools and Achievement: A Review And Suggestions For National Guidelines*, finds that the majority of studies are seriously flawed because of the types of achievement data they review. The report presents a critique of current data on charter schools. The report's advisor states, "Everyone wants to know how charter schools are performing, but largely because of inadequate data we aren't learning what we need to know from existing research."<sup>48</sup> However, preliminary data on charter schools shows signs of success on standardized exams in several states. Wisconsin charter schools are proven to do better than traditional schools based on results of state tests in 4th and 8th grade for two academic years.<sup>49</sup> Through the 2003 Michigan Assessment of Educational Progress (MEAP) test, charter schools showed greater gains than the statewide average in all but one of ten grades and subjects.<sup>50</sup> And on 2003 state exams in Massachusetts, 60% of urban charter schools outperformed comparable traditional schools.<sup>51</sup> A national report released by the Brookings Institute in 2003 showed that test scores at charter schools were "rising sharply" and out-gaining traditional schools.<sup>52</sup>

### **Technology**

Technology used by teachers and students comes in the form of classroom computers, individual laptops, DVD's, VCR's and distance learning technology.

The Pennsylvania Department of Education monitors classroom technology through its *Technology Inventory Report*, the most recent of which was released in 2004. The Department of Education inventoried Intermediate Units statewide to compile this report. The report surveyed teachers and students and asked each five specific

questions. Intermediate Units (IU), IU18 and IU19 are located in the Scranton/Wilkes-Barre/Hazleton MSA.

Teachers were asked:

1. How often do teachers use technology to prepare lesson presentations?
2. How often do teachers use software to collect data, manage student information, create correspondence, newsletters, etc. and develop classroom schedules?
3. How often do teachers support individualized learning or tutoring (e.g. using computer or Web-based modules or courses)?
4. How often do teachers use technology to remediate basic skills in math and reading?
5. How often do teachers use technology to assess student progress?

The following tables show both local intermediate units' results compared with statewide totals.

<b>2004 Technology Inventory Report: <i>Teachers</i></b>									
<b>1. How often do teachers regularly use technology to prepare lesson presentations?</b>									
Statewide totals: 37%									
Northeastern Educational IU 19 Totals: 14.7%									
Luzerne IU 18 Totals: 13.4%									
<b>2. How often do teachers regularly use software to collect data, manage student information, create correspondence, newsletters, etc. and develop classroom schedules?</b>									
Statewide totals: 54.2%									
Northeastern Educational IU 19 Totals: 34.7%									
Luzerne IU 18 Totals: 29.9%									
<b>3. How often do teachers regularly support individualized learning or tutoring (e.g. using computer or Web-based modules or courses)?</b>									
Statewide totals: 37%									
Northeastern Educational IU 19 Totals: 26.7%									
Luzerne IU 18 Totals: 26.9%									
<b>4. How often do teachers regularly use technology to remediate basic skills in math and reading?</b>									
Statewide totals: 44.8%									
Northeastern Educational IU 19 Totals: 30.7%									
Luzerne IU 18 Totals: 47.8%									
<b>5. How often do teachers use technology to assess student progress?</b>									
Statewide totals: 40.1%									
Northeastern Educational IU 19 Totals: 17.3%									
Luzerne IU 18 Totals: 26.9%									

*Source: Pennsylvania Technology Inventory, Pa Department of Education.*

From this data it can be inferred that both intermediate units' (IU) averages vary in comparison to statewide totals. For example, answers to question one display that, at 37%, the statewide percentage of teachers who regularly use technology is much higher than 14.7 % reported from IU19 and 13.4% from IU18.

Students were asked:

1. How often is technology used by students to collect information (e.g. via Internet, World Wide Web, Online services, CD- ROM-based reference software)?
2. How often is technology used by students to organize, store, and structure information (e.g. creating databases or spreadsheet files)?
3. How often is technology used by students to manipulate /calculate/analyze/interpret information to make logical conclusions (e.g. sorting databases or spreadsheet files, using electronic graphic organizers)?
4. How often is technology used by students to communicate /publish/present findings (e.g. email, online discussion areas, multimedia presentations, or on a web site)?
5. How often is technology used by students to communicate/interact with others in the classroom/school/ outside of school (e.g. using email, bulletin boards, and discussion areas)?

**2004 Technology Inventory Report: *Students***

**1. How often is technology regularly used by students to collect information (e.g. via Internet, World Wide Web, Online services, CD- ROM-based reference software)?**

Statewide totals: 51.4%							
Northeastern Educational IU 19 Totals: 51.4%							
Luzerne IU 18 Totals: 47%							

**2. How often is technology regularly used by students to organize, store, and structure information (e.g. creating databases or spreadsheet files)?**

Statewide totals: 21.3%							
Northeastern Educational IU 19 Totals: 15.7%							
Luzerne IU 18 Totals: 19.7%							

**3. How often is technology regularly used by students to manipulate /calculate/analyze/interpret information to make logical conclusions (e.g. sorting databases or spreadsheet files, using electronic**

Statewide totals: 16.7%							
Northeastern Educational IU 19 Totals: 11.4%							
Luzerne IU 18 Totals: 19.7%							

**4. How often is technology regularly used by students to communicate /publish/present findings (e.g. email, online discussion areas, multimedia presentations, or on a web site)?**

Statewide totals: 21.1%							
Northeastern Educational IU 19 Totals: 15.7%							
Luzerne IU 18 Totals: 19.7%							

**5. How often is technology regularly used by students to communicate/interact with others in the classroom/school/outside of school (e.g. using email, bulletin boards, discussion areas)?**

Statewide totals: 17.4%							
Northeastern Educational IU 19 Totals: 14.3%							
Luzerne IU 18 Totals: 21.2%							

*Source: Pennsylvania Technology Inventory, Pa Department of Education.*

After surveying students about regular use of technology, the following data was found. Statewide percentages of students who regularly use technology to collect information is at 51.4%, with IU19 at the statewide percentage of 51.4% and IU18 at 47%. Upon analysis of this data, it should be noted that large percentages of students and teachers do not regularly use technology on the state and local levels. Overall, both have room for improvement, as some percentages of students and teachers using technology are below 20%.<sup>53</sup>

An interview conducted by the George Lucas Educational Foundation for its publication of *Edutopia Online* discussed with Sandra Villarreal McSweeney, of the Sherman Oaks Community Charter School in California, the use of technology and project-based learning. Villarreal McSweeney stated that her students use computers almost daily. They begin with the “Type to Learn” program, whereby they are taught correct keyboarding. Her students are permitted to utilize computers whenever they want and are encouraged to utilize the computers to write.

Some children in Villarreal McSweeney’s program have increased writing skills and frequency, simply by having the opportunity to do so on a computer versus paper. She also believes that the value of technology for her students is that regardless of the students’ backgrounds, when they come to school, they are all in the same field with the same opportunity to utilize technology. Her program promotes an application for creativity for students and writing seems to increase with the ability to edit as they go.<sup>54</sup>

#### **IV. CURRENT INITIATIVES TO IMPROVE EDUCATION**

##### ***Bridge Project***

Aside from NCLB, a number of federal initiatives are being introduced in order to improve education nationwide. In addition, private organizations continually launch new initiatives to help national, state, and local departments formulate ideas.

An example of such is Stanford University, which created the Bridge Project in its attempt to “bridge” K-12 education to higher education. The Bridge Project included a number of recommendations to federal, state, and local departments. Recommendations are located in a Bridge Project toolkit developed by educational researchers. The toolkit consists of interview questions administered to four-year university and community college faculty and administrators, and K-12 teachers, counselors, and administrators; surveys of students in grades 9 and 11; and focus groups of 11<sup>th</sup> grade and first year community college students.<sup>55</sup> Research results help to integrate K-12 practices with continuing education practices. The information collected helps administrators examine best practices from around the country, which in turn helps to generate new ideas.

##### ***Student Voices***

Student Voices, created and implemented by the Annenberg Public Policy Center of the University of Pennsylvania, is a project that engages students in the study of local government, policy issues, and political campaigns. The program includes participants from schools in 11 states and the District of Columbia. Through it, students identify issues of concern, research them, and make presentations to elected officials and candidates. Student Voices helps students master research and public speaking skills, in addition to fostering critical thinking and



civic engagement.<sup>56</sup>

#### ***Cleveland Institute of Music***

Using Internet 2 capabilities, the Cleveland Institute of Music offers distance learning programs in music and math, theater, science of sound, and language arts and music to Pre-K and K-12 students across the country. Since its programs are interdisciplinary in nature, they address academic content standards in math, science, language arts, history and geography. They reinforce core curriculum in a unique and technologically advanced way.<sup>57</sup>



#### ***Kindergarten Plus***

Kindergarten Plus is a New Mexico pilot program aimed at providing disadvantaged kindergarten students an opportunity to begin the school year one month prior to other students. When the school year ends, these students receive an additional month of assistance to help with the transition to first grade. The concept, created by a former American Federation Teachers president, became New Mexico law and included a pilot program in three Title 1 districts. Each district received \$400,000 per year to implement Kindergarten Plus. Initial evaluation of the initiative showed improvement in testing and a reduction in students classified as demonstrating “delayed skills.” In March 2006, New Mexico’s legislature passed a \$1 million project extension and expansion. Other states are modeling similar programs and a federal bill has been introduced.<sup>58</sup>

#### ***International Baccalaureate Program***

The International Baccalaureate Program (IB) was founded in Geneva in 1968. While only 677 schools in the U.S. participate, the program is offered at more than 1,700 schools in 122 countries. Through the program, schools apply and once accepted, teachers are specially trained and schools are evaluated every five years. IB study requires students to work on topic issues, present opposing views, and make presentations. Students use critical thinking skills as opposed to memorizing facts. The intensive, inquiry-based program has not gone without criticism, as sensitive and controversial issues are sometimes covered. The IB program differs from Advance Placement (AP) programs in that students are required to conduct independent research and community service. Both offer college credit for courses taken in high school.<sup>59</sup>

#### ***Jump\$tart: Financial Smarts for Students***

Funded by the Commonwealth of Pennsylvania, Jump\$tart: Financial Smarts for Students is a financial literacy program for students. The program focuses on managing money, credit cards, insurance, retirement and savings accounts. The 2006 survey measuring personal finance basic knowledge averaged at 52.4%. The survey noted that minorities scored lower and those from families with higher incomes (over \$80K) were lower than those in the \$40K - \$80K range.<sup>60</sup>

#### ***Teacher Salary Based on Performance***

*The Miami Herald* reported on the concept of Mathew Pinzur, which focused on the Miami-Dade County School’s policy to increase teacher’s salary according to performance. While performance would not be the only factor in determining increases, its weight would increase. Previously, Florida teacher salaries were based only on length of tenure, but with the new policy teachers’ impact in the classroom is measurable. Local policy makers have offered a number of ways to employ this new policy, including classroom observations, through which observers witness a teacher’s influence on a student.<sup>61</sup> It is believed that this policy may motivate teachers to become more involved and active in the classroom, which obviously correlates with student performance. If teachers are motivated, they

are more inclined to come up with innovative ways of teaching, which may spark increased student interest.

### ***Teacher Compensation***

Teacher Compensation has been addressed in Cincinnati, Ohio. In Cincinnati, teachers' base pay is determined by measuring each teacher's knowledge and skills. The district has adopted standards for teaching practice and a performance evaluation system that assesses teachers against five levels of performance. Major salary increases occur when the teacher's clinical classroom practice meets the next highest performance level. An analysis of the compensation system showed that higher teacher evaluation scores translate directly into greater student achievement.<sup>62</sup>

### ***Step Mod Learning System***

In Riverside, California, one school is trying an innovative concept that goes against the use of traditional grade levels. The school uses a program called Step Mod, through which children in elementary grade levels are assigned to reading and math steps according to proficiency rather than age. Advanced students can move ahead without being held back by students that need extra attention, and those needing extra attention can receive it by moving at an expected rate, without falling behind. The program provides students with a better chance for success, regardless of whether they are on an advanced, moderate, or below average level. This innovative approach has proven to be quite successful as Stanford Achievement test scores have been raised in every classroom, and grade levels run from one to three levels above the national average.<sup>63</sup> An initiative like this would work well in some of



the schools in the area that have closed small neighborhood schools, in favor of building larger regional schools.

### ***Edison School/Pacific Park Project***

The City of Glendale, California, and the Glendale Unified School District are partnering on a development project known as the Edison School/Pacific Park Project. The project will provide a new elementary school, community center, library, and expansion of an existing park for all Glendale residents. This community-based project is an example of a shared use effort that benefits both the community and the school.

An agreement was penned that gives the elementary school exclusive use of the facilities during school hours, while the community may use the facilities after school and on weekends. All joint-use facilities are accessible from either the school grounds or the community center/library/park and facilities have separate entrances for students and the community.

The project cost was \$17.9 million and provides fiscal benefits to both the school district and the community. First and foremost were reduced construction, land and operational costs. It was estimated that the joint-use strategy saves each entity approximately \$5 million compared with costs incurred if they had built stand-alone facilities on separate sites. The shared use concept maximized investment of limited public money.

Additionally, the community at large benefited from this facility, as children, teenagers, adults and seniors share the facilities.<sup>64</sup>

***Schools Uniting Neighborhoods Initiative (SUN)***

Schools Uniting Neighborhoods Initiative (SUN) is collaboration of city, county, state and schools in Portland / Multnomah County, Oregon, launched in 1999. Aimed at improving the lives of children, their families and the community at large through partnerships with local school communities, the initiative extended the school day and converted schools into neighborhood "community centers."

SUN community schools strive to be area "hubs". They connect with other community institutions, such as the libraries, parks, neighborhood centers and area health clinics, churches and businesses.

SUN community schools:

- Extend the school day and broaden the availability of educational resources
- Introduce and coordinate services to and within the community
- Bring the community together to break down isolation and strengthen families
- Build relationships across generations, cultures and incomes

SUN's goals are to:

- Improve student achievement, attendance, behavior and other skills for healthy development and academic success; it strives to do so through increasing the capacity of local schools to provide a safe, supervised and positive environment
- Increase family involvement in schools and school-based programs
- Increase community and business involvement in the schools and school-based programs
- Improve the system of collaboration among school districts, government, community-based agencies, families, citizens and business/corporate leaders
- Improve use of public facilities and services by locating services in community-based neighborhood schools

SUN community schools select a nonprofit agency to act as the organizing manager. Jointly, they hire SUN Site Managers to help build and join networks of services, classes and volunteers for the benefit of area youth and the community. SUN Managers coordinate such services and make sure they link to the academic school day.

SUN community schools:

- Tailor events, classes, services and activities to community needs through use of an Advisory Committee;
- Build upon existing community assets and link those with school activities;
- Join schools, community leaders and agency professionals to plan the best ways to support youth - in education, family involvement, the community, services and utilization of community facilities;
- Use an evaluation team to measure impact, celebrate success and continuously improve SUN school programs and their impact within the community.

There are currently 56 SUN schools.<sup>65</sup>

***Apple Computers***

Apple computers has partnered with school districts nationwide to improve technology and lessen the "Digital



Divide.” In Pennsylvania, two districts, Kutztown Area and Easton Area, have partnered with Apple to garner a new and innovative technology program.

In 2004, Kutztown Area School District implemented a laptop program. Entitled the One-to-One Initiative, the district, with assistance from Apple, provided laptop computers to 100% of the high school faculty and students – for a total of 700 laptops. Because of this initiative, all high school students are provided equal technology resources.

An implementation committee comprised of parents, school board members, and faculty members, works with administrators to implement the program. Initially, high costs of implementation were not supported by the school board. The district, however, was faced with either renovating or building a new high school, and therefore decided to upgrade its computer network infrastructure with the implementation of the Apple system.<sup>66</sup>



Apple provides comprehensive professional development (APD) to the faculty. Principal Eric Erb, of Kutztown High, stated, “Seeing the teachers in the APD sessions is like going into your most motivated class. You constantly hear, “Wow, look at this!” and “Oh this is awesome!” Our APD is fabulous, and has exceeded our expectations. The feedback we’ve received from the teachers has been extremely positive. They’re especially excited because they know we’re behind them all the way.”<sup>67</sup>

When students received iBook laptops in September 2004, a new technical support group kicked into gear. Dubbed the “Apple Corps” (but not affiliated with Apple), the team included a mix of student council members, athletes, Future Farmers of America, and Vocational Technology students, among others. The diverse members provide an invaluable blend of coaching and guidance to peers and teachers.

Following are some results of Kutztown High’s laptop program:

- 1 to 1 program extends learning and is less expensive than traditional technology infrastructure
- Apple Corps program provides new leadership opportunities for students and others
- Student involvement has greatly reduced technical support costs
- Laptops engage students and prepare them with skills for future education and employment<sup>68</sup>

Easton Area School District had an outdated technology program. With the arrival of a new technology director, the district began implementing new strategies to update its systems. Thomas Drago, Technology Director, initially purchased PowerBook laptops for each school board member. All members were “hooked” on the speed of the laptops. Since then, it has been a smooth and welcomed effort to replace PCs in Easton’s elementary schools.

Additionally, each school in the district now has a technology coordinator—a teacher in the school. The coordinator interacts well with the other faculty members and helps create and implement technology lessons within the curriculum. Easton Area also added several learning labs that provide digital resources for faculty and students. The district has completed its implementation plan in all elementary and middle schools, and by year-end it plans to complete high school and administrative office implementation.

In January 2006, the school board approved a 1 to 1 learning initiative that put laptops in the hands of 60 students at the Shawnee Success Academy. At this alternative school, students who struggled to become motivated and lacked skills to refocus on their studies were part of the initiative. Governor Rendell called Shawnee “the perfect

example off why laptop computers should be on the desks of every high school student.” Rendell also encouraged the State’s General Assembly to pass his \$200 million “Classrooms for the Future” initiative, which provides for a laptop for every high school student.

Results of this implementation include the following:

- Faculty and staff focus on students’ learning, rather than the technology
- The student information system has dramatically improved communication between teachers and parents
- Apple servers seamlessly support computers running on any platform<sup>69</sup>



#### ***Wicomico County Handheld Program***

In 2003, Wicomico County School District, in eastern Maryland, launched an initiative called the Wicomico County Handheld Program. Handhelds are a small but powerful device that help students improve review of their work, note-taking, writing, mathematics and organization. The school district partnered with K12 Handhelds to provide the devices in 24 schools, including 84 administrators, 207 teachers, and more than 800 students.

Teachers and a point person for K-12 Handhelds met to develop a curriculum that integrates use of such a device. K12 Handhelds then spent several months working with Maryland state curriculum standards and the teachers' lesson plan suggestions in order to create a customized handheld curriculum for the district.

Students began learning on the handhelds and using them more frequently. The program is currently ongoing within the Wicomico County schools.<sup>70</sup>

#### **United States**

##### ***Washington, DC***

Cesar Chavez High School for Public Policy, in Washington, D.C., focuses on a college preparatory curriculum and requires student involvement in community service, internships and completion of a thesis. Chavez High School has 500 students, the majority of which are from low-income families.<sup>71</sup>

##### ***Arizona***

Arizona has a charter school that requires its 300 7<sup>th</sup> – 12<sup>th</sup> grade students to follow a curriculum based upon the Great Books concept; the concept is known as the basis of Western Civilization. All students must study music, art, drama, math, science, languages (Latin, Greek, or modern), English, and history. The school has become so popular that it now holds a lottery for admission, despite it being tuition-free. Teaching methods in the charter school focus on “how” to learn the subject matter.<sup>72</sup>

##### ***New York***

Because it is believed that the genders learn differently, Young Women’s Leadership School, in East Harlem, New York, segregates male and female students in academic classes. The U.S. Department of Education is currently conducting a study on the program to determine its effectiveness.<sup>73</sup>

##### ***San Diego***

In California, San Diego City Schools has a total of 136,000 students; 113 elementary schools; 23 middle schools; 27 high schools; 4 atypical schools; 10 alternative schools; and 25 charter schools.

- San Diego City Schools launched a district-wide reform - Blueprint for Student Success at the start of the 1998-99 school year.
- To improve student achievement, Blueprint for Student Success narrows in on professional development, high-quality instructional materials, and research-based teaching approaches.<sup>74</sup> Blueprint for Success is implemented by the principal at each school who serves as an instructional leader, with the understanding that they will increase their overall student achievement, as measured by CAT 6, the California standards tests, and other assessments, and decrease the time required to effectively implement their instructional strategy. The district expects principals to be prepared to lead their schools through this powerful academic improvement program change that produces improved student achievement and school success.<sup>75</sup>

### ***Kansas City (Missouri or Kansas)***

Kansas City Public Schools have a total of 20,162 students; 3 preschools; 30 elementary schools; 8 middle schools; and 4 senior high schools.

- In 1996, the Kansas City School District launched First Things First, a reform designed by the Institute for Research and Reform in Education.
- First Things First focuses on improving instruction in a number of ways - from reducing student/teacher ratios in classrooms, to creating teacher incentives, and giving principals increased authority and autonomy.
- The district rolled out the program over three years in phases - each focusing on a cluster of elementary, middle and high schools.<sup>76</sup>

## **V. CASE STUDY**

According to the U.S. Department of Education web site concerning the —NCLB - the act is working and has led to significant public education improvements. NCLB is believed to benefit children, empower parents, supports teachers, and strengthens schools. The department sites various studies and data that report rising student achievement across the U.S.

Released in July 2005, the Nation's Report Card indicated that math and reading levels in elementary schools are at an all-time high and the achievement gap is closing. The report found that America's nine-year-olds have displayed higher achievement in reading over the last five years than in the previous 28 consecutive years. In addition, an important advancement is that thirteen-year-olds achieved the highest math scores that have ever been reported in the history of the Nation's Report Card.

The Nation's Report Card State-by-State is another report. This report has shown an improvement in achievement in earlier grades, on which NCLB focuses. Forty-three states and the District of Columbia have either demonstrated improvements or held steady in academic categories.

Yet, there are a number of studies pointing to



the failure of the NCLB initiative. Everything from non-standardized performance measures, teaching emphasized on “taking the test,” and loss of time devoted to other subjects. The biggest problem with NCLB is that it doesn’t address the needs of the average to above-average student. These students are often held back so that the under-achiever’s level is the level they are taught to. Given the global nature of the US economy and the global competition, this must be addressed.

In his 2007 budget, President Bush presented an increase in NCLB funding for the various areas of education and institutional funding.

The following case studies evidence results of specific programs that have been tested in schools in China and the U.S. Such case studies also provide a glimpse into progressive school systems in action that have tried and have proven results from the initiatives.

### China

China’s education system focuses on strong national standards, a structured progression from easy to difficult subject matter, and extensive teacher training. Books, materials, and teacher education and development are guided by national standards, leading to consistency between classrooms and schools on the subject matter taught.<sup>77</sup>

Science and math are a major focus from kindergarten through the secondary level with specific grade level requirements in place.

The U.S. differs from China in that it has no mandatory national standards for reading and math. The U.S. does include voluntary guidelines, and the U.S. Department of Education delegates most of the control to states and local school districts to determine matters taught and when. As a result, children in different classrooms within the same school and in the same grade are most likely learning different content.

While China has inequities in urban vs. rural schools, China, Japan, Singapore, and South Korea continually outperform the U.S. in comparisons of students’ math and science abilities.

A study entitled “*Education in China: Lessons for U.S. Educators*” suggests a number of reasons why the U.S. struggles to compete. The report concludes that “Classroom materials in American schools are too often presented in an inconsistent and repetitive way.” It also contends that the U.S. curriculum is very uneven, often circling back through topics over a student’s course of study, without teaching basic concepts to master.<sup>78</sup>

Additionally, the report indicates that Chinese students spend almost twice as many hours studying than American students (both in school and at home). While China requires nine years of mandatory schooling, compared with 12 in the U.S., China sees most students continuing for an additional three years of study.<sup>79</sup> Further, China’s teachers receive stronger academic content training and considerably more mentoring than American teachers, however there exists a disparity between urban and rural areas.

The report further indicates that the U.S. is stronger in teaching critical thinking skills. Therefore, both countries may learn from one another.<sup>80</sup>



## **VI. CONCLUSION**

Overall, education quality must improve. From its impact on our global competitiveness, to a community's ability to take care of itself, to a higher standard of living, a quality based K-12 public education system that serves as a corridor to higher education is imperative.

Since innovation is often a synthesis of art, and since science and innovation will level the economic playing field, a balance between math, science, and art is necessary.<sup>81</sup> All members of a community should be concerned about educating its young people, especially if tax dollars are used to fund and run school districts. Citizens have a voice in their public education systems. Schools, teachers, administrators, parents, and community members must be involved in the educational process. This approach to education could only benefit children, schools, and the community at large. By creating an environment that encourages learning to the best of one's ability — our nation will continue to thrive. Providing educational opportunities for children and adults, the likelihood of learning from one another increases.

Some of the initiatives included in this report could be considered in most communities. By creating collaborative partnerships with the community, government, for profit and nonprofit organizations, and our higher education infrastructure, our schools have opportunities to offer more to students than just reading and writing. New initiatives don't transpire overnight; they require willing partners who will go an extra step to implement innovative and diverse programs that bring added value.

The private sector possesses the greatest opportunity to help improve education, mainly because of the financial support it has. For education quality to be improved on any large scale, federal and state funding must first be increased. On the national level, teachers in northern states are paid much more than their counterparts in southern states. Funding is a key factor in improving education quality nationally because it filters down into the state and local institutions. The funding must, however, be distributed to those schools in the most need (i.e., schools that have a warning status in the AYP). Another funding concept is the previously mentioned teacher pay incentives. Teachers must be given more incentives if we are to attract and keep strong leadership in our schools. Teachers have one of the most important jobs in society, and deserve to be compensated for the extra effort they give to educating our children. Conversely, teachers that are ineffective should be penalized. Tenure should not be the determining factor in their job security. Performance measurements used in the private sector provide a great business model for success. The same should apply in education. If an increase in test scores is a direct result of the teacher's positive influence, that teacher should receive a performance based pay increase.

An interesting initiative that should be further examined is that of summer learning, or sometimes referred to as year-round schooling. Because of the current 180 day schedule of most schools, research from Johns Hopkins University points to a loss of learning in both procedural and factual knowledge. There is also a correlation between summer learning loss in reading and in math and socio-economic status. Re-structuring the curriculum seems to be a sound way to decrease summer learning loss, keep kids involved in school activities, and make use of school facilities for more months out of the year. The only drawback that may impact older high school students would be the potential of summer classes to interfere with summer jobs and employers who rely on students to work part- or full-time during summer months.

Other countries that successfully produce globally competitive workforces approach the problem of learning loss by extending the school year. In Japan, students attend school for 240 days/year, while in Germany, they attend school 243 days/year.

The example that has been created and proven effective in Hawarden Hills Academy, Riverside, CA may also work in regional school environments where there are a number of teachers at each grade level. Although Hawarden Hills Academy is a private school, its structure can work in the public school environment. With public schools suffering a drop in test scores, new innovations such as this Step Mod Learning System may help to

increase productivity in elementary and middle schools. Larger integrated districts may serve as a test site for the approach. Students in the primary levels benefit because those who need extra attention are segregated and don't inhibit advanced students. By applying this approach, students who lack proficiency may be able to better apply themselves and strive toward an increase in productivity.

***Newsweek Magazine***

In its May 8, 2006 edition, *Newsweek* magazine published a report on public schools, entitled "The Public Elites." The report identified a number of schools whose SAT and ACT scores significantly exceeded the highest average for any normal enrollment school in the country. As such, the school's average SAT score had to exceed 1300. At a cursory look, the schools had several things in common, including: an academic focus (science and math, English and history, political science, etc.) and a college preparatory curriculum. Notable differences included the fact that some schools implemented competitive admissions, some were boarding schools, while others had active university partnerships.<sup>82</sup>

In closing, the importance of education to our future is so significant on a such a scale that our standard of living is greatly impacted. Many successful blue collar economies don't appear to support higher education or value the K-12 as much as they should. The quality of our schools and the quality of our students should be of grave concern to all members of the community not just parents, students, teachers, and administrators. This is the time when innovation and change will bring impact to communities, regions, and individuals. Our world is getting stronger and global competitiveness is more of a threat than ever before. The time to act is now.

## APPENDIX I

### **No Child Left Behind (NCLB)**

The “blueprint” of NCLB establishes four key goals that the legislation sets out to accomplish. The first goal is to increase accountability for student performance. This involves the state and school districts being rewarded for achievements and sanctioned for failures. Parents are informed of student and school performance annually. NCLB’s second goal is to focus on what works. Funds provided to the states are earmarked for effective programs that improve schools and enhance teacher quality. The third goal of NCLB is to reduce bureaucracy and increase flexibility within the respective states and school districts. NCLB’s final goal is to empower parents by keeping them well informed on the quality of education, and give them the choice of transferring the child if the school does not perform adequately over time.

The first priority of states and school districts is to improve the quality of teachers who instruct students. Schools are given aid in creating and implementing a high-quality teacher training force. States are free to use funds to reform current teacher certification and licensure requirements. States are then held accountable for the development and implementation of all changes. The federal government works to create a link between states and institutions of higher education to improve K-12 math and science education. There is also a movement to increase the number of teachers who specialize in the math or science field.

Next, states and school districts are to focus on achieving equality through high standards and accountability. States are given three years to develop and implement annual reading and math assessments for grades 3-8. This helps to ensure that expectations are being met for each child, every year. There is a school performance report card released each year for parents and the public to review how the school is performing in different areas.

Another program for schools focuses on the students with limited English proficiency and aiding them in becoming fluent in English. Districts are allowed more flexibility when using bilingual funds. States and the school districts are held accountable for making annual increases in the student’s English proficiency from the previous year. In addition, schools are required to teach in English only after a student has three consecutive years of being in the school.

School safety has become a major concern for parents in the 21<sup>st</sup> Century and NCLB also addresses this important issue. Federal grants are provided to school districts to implement before and after school learning opportunities and to create violence and drug prevention activities. States are held accountable for the programs and parents receive updates on the opportunities and prevention activities offered to children. Schools and the teachers are asked to implement a zero-tolerance policy for any student that consistently shows poor behavior and disrupts classes or school activities. In addition, school districts receive a performance-based technology grant for use toward the creation of an integrated education technology program.

Finally, NCLB creates a system that provides for state and school district freedom and accountability to improve achievement. In addition, states are granted increased flexibility in spending federal education funds. And emphasis is made on rewarding areas that show progress and improvement and issuing sanctions to areas showing failure or lack of progress.

A final issue that NCLB legislation addresses is the change to occur in the structure of the institutions. The areas of focus include buildings, schedules, and technology. Federal obligation in the form of school construction and environment is provided to schools teaching Native American and military children. Schools are expected to meet the federal requirements that have been put in place for the teaching of Native American and military children.

As new technology is introduced, it naturally becomes an integral part of everyday life. Technology within the school system is no exception and NCLB addresses the need for improved classroom technology. A program will be developed to foster comprehensive and integrated education technology strategies that focus on the individual

needs of each institution. In addition, technology grants will be consolidated to make it easier for institutions to apply and receive such funds. Funds will also be available for institutions to implement to protect students from inappropriate information. Finally, schools will be asked to create goals that could be observed to ensure they give students the appropriate technology.

Under NCLB, schools that do not meet mandates in reading and math after five years must develop a restructuring plan for implementation in year six. Choices under the restructuring plan include:

- Hiring an outside organization to run the school
- Re-opening the school as a charter school, with new leadership and less regulation
- Replacing all or most of the school's staff with ties to the schools failure
- Turning the operation of the school over to the state
- Choosing any other major restructuring that will fundamentally reform the school

Most schools facing restructuring chose to implement other initiatives to fundamentally reform the school. This option allows for the most invasive strategies that can be tailored to the school. For example, in Arizona, one school lengthened its school day, expanded tutoring and bonus pay and required all teachers to reapply for their jobs.

NCLB is prompting many schools (71%) to cut back on subjects (like social studies, music, and art) in order to invest more time in reading and math. While this helps to achieve reading and math proficiencies in testing, students are being short changed of a well rounded curriculum. Yet other schools have found a balance and teach both.

This information is from the Center on Education Policy as it focuses on the fourth year of the NCLB's administration.<sup>83</sup>

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