

## **High school leadership: The challenge of managing resources and competencies**

Falih M. Alsaaty  
College of Business, Bowie State University, MD

Archie Morris III  
College of Business, Bowie State University, MD

### **ABSTRACT**

High schools play a vital role in achieving and reflecting American ideals and culture. They provide the foundation for the country's economic, social, and political systems as well as the impetus for its scientific progress and technological superiority. The purpose of this study was to explore the challenges facing high schools leadership in their efforts to manage available resources and accomplish their mission of educational excellence. Contrary to popular perception, the study found that the overall situation of the schools surveyed was highly satisfactory even though additional financial and other resources – coupled with strategic planning – could enhance the schools' competencies and intensify their contribution to the nation's global competitiveness.

Keywords: principals, public schools, teachers, leadership, participants

Copyright statement: Authors retain the copyright to the manuscripts published in AABRI journals. Please see the AABRI Copyright Policy at <http://www.aabri.com/copyright.html>

## INTRODUCTION

Public high schools in the United States are indispensable institutions for the country's economic growth and competitiveness. They establish the educational foundation for students bound for our colleges and universities and provide the major source of skilled and semi-skilled labor for the economy. In their own right, the schools are also an important employer for educators, technical staff, and other supporting personnel. Schools' expenditures on salaries, technology, construction, and the like play a vital role in promoting economic activities and fueling the growth and expansion of business firms. The contributions of high schools and other public educational institutions are inextricably linked to the country's progress and prosperity.

Scholars and policymakers have long acknowledged the important role of public schools and other educational institutions in the process of acculturation. For example, John Dewey (1897), in his remarkable exposition entitled *My Pedagogic Creed*, highlighted the necessity of public schools by saying "I believe that education is the fundamental method of social progress and reform." In the same vein, the Center on Education Policy expressed its view toward public schools by indicating that schools have been recognized as a gateway to opportunity for people from all economic and racial/ethnic backgrounds. In discussing the issues of standards, testing, and accountability in public schools, Whitehurst et al (2015) declared that it is necessary for the public to value the long-term impact of student learning.

The educational system of public schools, however, has been under scrutiny for decades. For example, in its 1983 study, *A Nation at Risk*, the National Commission on Excellence in Education stated that: "The educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a nation and a people." The National Education Association (NEA) expressed similar views in a 2008 article entitled "Reforming High Schools for the 21<sup>st</sup> Century – An Imperative." The NEA stated that: "America's high schools are in crisis. Far too many of our high schools are responsive not to 21st century realities but to the demands of an earlier time, when the foremost aim of education was to sort thousands of students into tracks and prepare them for employment in an industrialized economy."

In any case, there are indications that the combined efforts of federal, state, and school authorities in recent years have resulted in a steady increase in high school educational performance. According to the National Center for Education Statistics, the percentage of public high school students who graduate on time with a regular diploma increased from 73.7 percent in 1990/1991 to 80.0 percent in 2011/2012.

There is a dearth of academic research about the challenges facing high school leaders as perceived by high school principals themselves. This paper is intended to bridge this gap in the literature. Its purpose is to learn about the major obstacles facing high school leadership and to suggest some courses of action to policy makers in order to remedy the situation. The high school principals are considered here to be the embodiment of leadership of the institutions under discussion.

## DATA OVERVIEW

Published official data about public schools are invaluable because they reveal information concerning important aspects of the schools such as enrollment and finances. Timely data can assist policymakers to plan and execute viable educational strategies.

According to the National Center for Education Statistics, the total number of public educational institutions was 98,817 schools in 2010/2011, as compared to 85,982 schools in 1980/1981, an increase of 14.9 percent (Table 1 Appendix).

In considering the number of schools labeled “combined” and “Others” in Table 1, the number of high schools in 2010/2011 was roughly 30,681 schools, or 31 percent of the total. Moreover, there were about 32.8 million students in elementary schools and 16.6 million students in high schools for a total of 49.4 million students in 2011. By any standard, the number of students enrolled in public schools in the United States is impressive. Undoubtedly, the growing population of schools demands an increasing influx of resources, including funds, technology, visionary principals, skillful teachers, and other necessary support systems.

As mentioned earlier, public schools are a major source of employment of educators and supporting staff members. Recent data indicate that the total employment by high schools in the country amounted to 3.4 million individuals in 2011/2012, as compared to 2.6 million individuals in 1990/1991, an increase of 32.2 percent (Table 2 Appendix). During the same period, employment in secondary schools increased by 541 thousands (48.3 percent), while employment in elementary schools increased by 284 thousands (19.7 percent). Female teachers comprised the majority (76.3 percent) of employment in public schools in 2011/2012.

In public schools, student–teacher ratios vary widely among countries. A high ratio could suggest that the school is underfunded or in need of better government support. The ratio was 14:1 in U.S. public schools in 2013 while, according to the World Bank data, it was 18:1 for the United Kingdom, 9:1 for Kuwait and Cuba, 20:1 for Russia, 10:1 for Sweden, and 11:1 for Switzerland.

In the United States, there are three main sources of financing for the annual operations and capital outlay of public schools: federal, state, and local government. In 2011, for instance, the federal government, through the Department of Education, provided \$59.5 billion, which was approximately 10 percent of the financial needs of the country’s public schools (Table 3 Appendix). On the other hand, states and local governments supplied the lion’s share of the schools’ financial needs. In 2011, they channeled \$535 billion, or 90 percent, of the funding needs of the schools.

The growing number of public schools in the country – along with an army of teachers, administrators, and other staff members – are bound to require increasing annual budgets. In 2011, for example, the schools’ expenditures amounted to \$593.8 billion, of which \$316.6 billion, or 53.3 percent, was allocated to instruction, while the rest of the funds, \$277.2 billion, or 46.7 percent, was channeled to a variety of supporting services and other expenditures (Table 4 Appendix). It should not be surprising to find that the major portion of the funds was allocated to instruction and administration. Unlike capital-intensive automated factories, schools are labor (e.g., teachers) intensive. It is interesting to note that the cost per student was \$12,000 in 2011.

## LITERATURE REVIEW

The overwhelming majority of educators in the United States agree that there are many issues confronting the educational system of public schools in general, and high schools in particular. The issues are both intertwined and interrelated and can be grouped into four categories:

1. School principals
2. Schools as institutions of learning
3. Teachers
4. Students

High schools, in terms of enrollment, are generally large in size and, subsequently, viewed as complex organizations (Wildy and Clarke, 2008). Evidence abounds that managing a high school, in which students are of diverse cultures, languages, and social and economic backgrounds, is difficult and, at times, frustrating. The issues (or obstacles) facing the schools have been discussed in the literature for several decades. For example, Chen (2014) summarized ten major issues facing public schools, including classroom size, student poverty, bullying, student attitudes, insufficient funding, and lack of parental involvement.

As complex organizations, high schools require visionary leaders, skilled teachers, appropriate technology, innovative programs, motivated students, and sufficient funds. Correspondingly, the tasks of the principals are also complex (Horng, Klasik, and Loeb, 2010). The responsibilities of the principal, as a leader, are akin to those of the chief executive officer of a mid-sized international enterprise. Both are under daily pressure to provide diverse customers with quality service at the lowest cost possible while, at the same time, achieving the organization's other strategic goals.

As alluded to earlier, the challenges of managing many high schools are compounded by steadily increasing school population with insufficient resource appropriation. Undisciplined students create havoc in classrooms and disrupt the educational process. Family and economic issues often pave the way for some students to become educationally ambivalent and, hence, academically burdensome for the school.

According to a study by *RAND Education* (2012), more than 20 percent of first-year principals leave their positions within the first two years of their appointment and, while most new principals stayed at their schools for a longer periods of time, only a few factors could be identified that were clearly related to their retention and success. *RAND* researchers also found out that outcomes achieved by first-year principals varied greatly, but there was little evidence that the characteristics of a school, such as the demographics of the students or the school's prior achievement level, determined those outcomes. In terms of school funding, Eric Cheninger, a principal, expressed his views in *Edutopia* in 2009 by saying that: "I have been in my district for 6 years and have not seen a penny increase in that time."

Perfetto et al. (2013), in analyzing the mission statements of a number of high schools in Texas, concluded that school missions emphasized such key educational issues as student learning, skills, and success. In another study about school size, Darling-Hammond, Ancess, and Ort (2002) found out that small-sized schools produced (i) better student attendance, (ii) higher graduation rates, and (iii) higher college-bound student rates.

Johnson (2008) emphasized that most school districts seek principals who are highly capable of selecting, managing, and evaluating teachers, as well as performing classroom visits and offering constructive feedback to teachers.

Myers and Murphy (1995) pointed out that principals' actions and decisions are highly influenced by six types of administrative control imposed on them by school superintendents. The control mechanisms include four hierarchical controls (supervision, input, behavior, and output) and two non-hierarchical controls (socialization and environmental). Lynch (2012) indicated that, from historical perspectives, a key task of principals in the United States was to serve as disciplinarians and the teachers' boss. Tschanen-Moran and Gareis (2004), on the other hand, indicated that effective principals are the cornerstones of successful schools. In echoing a related view, Sebastian and Allensworth (2012) said that school principals have a direct influence on classroom instruction in addition to student achievement. Jantzen (2008) embraced the idea that high schools with lower student dropout rates are characterized by (i) good management, (ii) small classes, and (iii) qualified teachers.

Moreover, Chappelle and Price (2012) believe that high school principals, by virtue of being instructional leaders, can positively influence student behavior in their schools. Boyd et al. (2005) studied student performance in elementary public schools in New York City. The study revealed that the least qualified teachers often taught low-achieving students. In discussing the practice of hiring teachers in high schools, Lyng (2009) asserted that principals typically place a high value on the candidate's potential fit for the school's culture and less emphasis on their skills or content knowledge.

A study published in December 2015 by the National Association of Secondary School Principals pointed out that ten skills needed to be acquired by school leaders to achieve success in their positions of leadership role. The skills are grouped into four themes: (1) educational leadership, (2) resolving complex problems, (3) communication, and (4) self-development in addition to the development of others, as outlined below:

#### Educational Leadership

- Setting instructional direction
- Teamwork
- Sensitivity

#### Resolving Complex Problems

- Judgment
- Results orientation
- Organizational ability

#### Communication

- Oral communication
- Written communication

#### Developing Self and Others

- Developing others
- Understanding own strengths and weaknesses

To sum up, a review of the literature concerning public schools in general, and high schools in particular disclosed that the following key challenges confront the leadership of the schools in question:

- Student attendance and discipline
- Curriculum innovation/development
- New learning strategies
- Professional development of teachers
- Leadership mentorship programs
- Setting clear annual targets (goals)
- Policies about bullying and the use of cellular telephones

## **RESEARCH DESIGN**

A questionnaire designed to solicit information from high school principals of different districts in the United States was posted on SurveyMonkey® for the period August-December 2015. Of the 216 principals contacted via emails and telephone calls, 45 recipients, or 20.8 percent, responded fully to the questionnaire.

Of the total respondents, 41 percent were female principals and 59 percent were male principals. Sixty-eight percent were between the ages of 35 and 64 years, while the rest of them (32 percent) were 65 years or older. The majority of the respondents (58 percent) held a master's degree, 19 percent of them held a doctorate degree, and 23 percent held other academic degrees.

Furthermore, six percent of the participants had less than six years of teaching experience, 79 percent of them had between six and 25 years of teaching experience, and 15 percent had 26 or more years of teaching experience. On the basis of age, experience, and academic degree, the overwhelming majority of the surveyed principals were mature, highly educated, and knowledgeable in their profession.

The questionnaire deployed in the survey consisted of 44 questions designed to gather information about a variety of issues confronting school leaders in their efforts to manage – effectively and efficiently – the human and physical resources available to their institutions. The following are among the main issues covered in the questionnaire:

1. School enrollment, annual budget, physical facilities, maintenance, and security.
2. Number of full time teachers, teaching load, professional development, salaries, and compensations.
3. Technology availability (e.g., computers, software).
4. Parents' involvement in the educational affairs of their children.
5. Community involvement and school support.

High schools in the United States differ from state to state, from district to district, and from neighborhood to neighborhood. They differ in terms of enrollment, graduation rate, faculty education, student readiness, availability of technology, and so on. It is safe to assert that there is no such thing as a “typical” high school in the country. Each school is proud of its own personality attributes and accomplishments. Therefore, it is important to emphasize that the findings reported in this study do not reflect the actual educational

environment in any given state, district, or locality. The findings represent a broad picture of the educational environment of high schools in the country as perceived by the principals surveyed during the last part of 2015.

## **THE SCHOOLS AND STUDENTS**

Of the schools surveyed, four percent were located in rural geographic settings, 52 percent in suburban areas, and 44 percent in urban zones. The student body consisted of 54 percent female and 46 percent male, with an average minority enrollment of 44 percent. Moreover, about 34 percent of the students were classified as economically disadvantaged, 32 percent of them were registered in a free lunch program, and 11 percent in a reduced-price program. Table 5 (Appendix) below shows the average enrollment by grade level for the schools surveyed in 2015:

## **SCHOOL ISSUES**

Of the total respondents, 75 percent felt that the physical facilities of their schools were excellent or very good, 21 percent felt they were satisfactory or adequate, and four percent expressed no opinion. In terms of classrooms, administrative offices, library, science labs, cafeterias, healthcare units, gymnasiums, and other amenities, 68 percent of the respondents indicated that these facilities were adequate, 28 percent indicated that the facilities were not adequate, and four percent expressed no opinion. As far as the student-faculty ratio is concerned, 84 percent of the respondents pointed out that the ratio was in line with the national norm (i.e., 14:1).

Moreover, 96 percent of the participants indicated that the use of technology in their schools had resulted in enhanced benefits for student education. The term 'technology' was broadly defined in the questionnaire to include computers, projectors, online collaboration tools, presentation software, course management tools, and clickers.

Of the total participants, 76 percent of them believed that the teaching load for their faculty members was in line with the national average; 20 percent of them thought that the teaching load was not in accordance with the national average, and four percent did not respond to the question. The respondents felt that there was a need in their schools for such personnel as nurses, instructional assistants, counselors, and speech pathologists. Undoubtedly, these educational areas of support are critical for public schools and require the attention of state decision makers.

In inquiring about the annual school graduation rate, the majority of the principals (85 percent) indicated that the rate was between 91 and 100 percent. This is quite an accomplishment for the majority of the schools concerned. It indicates true involvement in the educational process of the schools' leadership, teachers, staff, and students. However, not all the schools in the sample were successful when compared to the rest of the surveyed institutions. Specifically, four percent of the schools achieved graduation rates between 41 and 50 percent, a situation that indicates managerial incompetence and other obstacles. Poor performing schools should be subject to study and analysis to facilitate taking corrective actions.

On the other hand, the great majority of the respondents (more than 90 percent) indicated that about 81 percent of their students seek to go to college. If students' intention – to pursue higher education studies – were to be materialized, then it would certainly be good news for colleges and universities throughout the country. It would also be welcoming news for policy makers at the state and federal levels because of the fact that investment in education is indeed productive and fruitful.

Mediocre performance of some schools in the United States could be attributed to many factors, including crowded schools, unenthusiastic teachers, poor institutional leadership, unmotivated students, unsuitable facilities, neighborhoods, and a host of other variables. For example, as far as crowded schools are concerned, this survey found that the student-faculty ratio was, on average, 18.5:1, with a range of 10:1 to 32:1. The wide range of the ratio implies that some schools in the country are relatively very “crowded”, which, among other things, makes it difficult for principals to manage properly and optimally.

In terms of human relations, all the respondents felt that their students had harmonious relationships with teachers and administrators. Moreover, 92 percent of the respondents believed that teachers in their school were highly supportive of managerial and administrative rules and procedures. This finding is an indication that the educational process in the institutions surveyed was largely congenial and smoothly managed.

## **COMMUNITY AND STUDENT GOVERNANCE**

It is interesting to note that the schools under discussion received overwhelming support from their own communities. For instance, the great majority (92 percent) of the principals surveyed believed that their students' parents were involved in, and supportive of, their school's educational and extracurricular activities, including programs designed for parents. Undeniably, parents and community involvement in school activities is a critical element for the success of the educational process and its progress.

The issue of student governance – student representation in committees to review student disobedience matters with respect to educational and administrative policies such as suspension, expulsion, and educational ethics – was viewed from different perspectives by the principals contacted. Of the total respondents, 36 percent favored the institution of formal student governance practice, 60 percent did not favor student governance, and four percent refrained from expressing their views.

## **PROFESSIONAL DEVELOPMENT**

In a public school, students' superior academic performance is largely influenced by the qualification and dedication of the school leadership, as well as teacher efforts and commitment to the institution. Similarly, competent school management is the outcome of the education and training of school leadership. In this context, professional development of principals in business and management disciplines is of the utmost importance to attain excellence in school management. Areas of development include human resource management, project management, business strategy, accounting, financial analysis, and so on. In this survey, the majority of principals (80 percent) supported the idea of formal

training in management and business approaches and techniques in order to further improve their leadership effectiveness and managerial competency.

### **ARE STUDENTS FALLING BEHIND?**

The following statement/question was posed to the principals surveyed: The National Commission on Excellence in Education has reported that American students were at risk of falling behind students from other countries, and that this situation has imperiled our national security and future prosperity. Accordingly, it is often said, “Public schools are in state of crisis.” In response to this, the principals in the sample expressed conflicting opinions. While 63 percent of them disagreed with the conclusion that public schools are in state of crisis, 37 percent were in agreement with the presumption.

In addressing the academic performance of students, however, 92 percent of the principals concluded that the overall academic performance of the students in their school – as reflected by grade point average (GPA) and standardized test scores – is good. Additionally, 96 percent of the principals indicated that the graduation rate in their school was satisfactory as compared to the national graduation rate.

### **ISSUES THAT DEMAND ATTENTION**

According to the principals surveyed, the following school issues demanded more attention from state officials (Table 6 Appendix):

- Increased financing;
- Technology enhancement;
- Hiring specialized teachers;
- Salary increase;
- Facility improvement and expansion; and
- Employing additional security personnel.

### **ARE HIGH SCHOOLS PRINCIPALS SATISFIED?**

In responding to the statement: “In spite of the daily challenges I face, I am satisfied with my leadership role at this institution,” 96 percent of the principals replied positively, while the rest (four percent) of them expressed no opinion. Leadership satisfaction with highly challenging institutional internal (school population) and external environments (outside stakeholders) is a clear indication of the principals’ devotion to their students, institutions, and the society at large.

### **CONCLUSION**

High school principals fill important academic and administrative roles in the educational system where there is an endless stream of young men and women who seek learning and personal growth. Principals are leaders within the educational establishment and they provide guidance to teachers, students, staff, and others. Thus, strong interpersonal, educational, and communication skills are essential for high school principals.

This study of high school leadership and environment reveals the need for policy decisions and actions in several important education-related areas to enhance further the performance, productivity, and distinctiveness of the nation's high schools. Among these areas are:

- Adoption of professional development programs for high school leadership (i.e., principals, assistant principals) in management, business, and public administration disciplines. Emphasis should be on such subjects as strategic management, accounting, financial analysis, public budgeting, and human resource management. As well, professional development programs in disciplines related to public school academic programs and activities should be inaugurated for teachers. The programs may also include participation in academic seminars, conferences, and enrollment in specialized courses.
- Increased funding for essential educational are needed principally in the areas of technology, teaching, and security.

Finally, the study shows that a few public schools in some districts throughout the country are in a state of volatility and, perhaps, chaos. Clearly, such institutions require urgent attention to identify major issues confronting them and address them. Undoubtedly, it is the responsibility of state officials and district educational agencies to monitor, analyze, and assess the situation of individual high schools, and judge their performance.

## REFERENCES

- Boyd, Donald; Lankford, Hamilton; Loeb, Susanna; Wyckoff, James (2005). "Explaining the Short Career of High-Achieving Teachers in Schools with Low-Performing Students," *The American Economic Review*, 95(2), 166-171.
- "Challenges and Opportunities Facing Principals in the First Year at a School," *RAND Education*, Santa Monica, CA: RAND Corporation, 2012.  
[http://www.rand.org/pubs/research\\_briefs/RB9643/index1.html](http://www.rand.org/pubs/research_briefs/RB9643/index1.html)
- Chappelear, T.C. and Price, Ted (2012). "Teachers' preparations of High School Principal's Monitoring of Student Progress and the Relationship to Students Achievement," *International Journal of Educational Leadership Preparation*, 7(2).
- Chen, Grace (January 2014). "10 Major Challenges Facing Public Schools," *Public School Review*,  
<http://www.publicschoolreview.com/blog/10-major-challenges-facing-public-schools>
- Darling-Hammond, Linda; Aness, Jacqueline; Ort, Susanna W. (2002). "Reinventing High Schools: Outcomes of the Coalition Campus Schools Project," *American Educational Research Journal*, 39(3).
- Data Bank, "Pupil-teacher ratio in primary education," Washington, DC: The World Bank, 2016. <http://data.worldbank.org/indicator/SE.PRM.ENRL.TC.ZS>
- Horng, Eileen, Lai; Klasik, Daniel; Loeb, Susanna (2010). "Principal's Time Use and School Effectiveness," *American Journal of Education* 116(4), 491-523.
- Jantzen, Robert (2008). "Improving Public High Schools: Evidence from New York," *International Advances in Economic Research*, 14(1), 101-108.

- John Dewey (1897). "My Pedagogical Creed," *School Journal*, 54, 77-80.  
<http://dewey.pragmatism.org/creed.htm>
- Johnson, Jean (2008). "The Principal's Priority 1," *Educational Leadership*, 66(1), 72-76.
- Kober, Nancy (January 2007). *Why We Still Need Public Schools: Public Education for the Common Good*, Washington, DC, Center on Education Policy;  
<http://www.cep-dc.org/displayDocument.cfm?>
- Lynch, Jeremy, M. (2012). "Responsibilities of Today's Principal: Implications for Principal Preparation Programs and Principal Certification Policies," *Rural Special Education Quarterly*, 31(2), 40-47.
- Lyng, Steven, J. (2009). "Hiring Certified Teachers: A Qualitative Study of the Experience and Practice of High School Principals in a Midwestern State," *Ph.D. Dissertation*, Purdue University.
- Mulford, Bill et al. (2008). "Successful Principalship of High-Performance School in High-Poverty Communities," *Journal of Educational Administration*, 46(4), 461-480.
- Myers, Emily and Murphy, Joseph (1995). "Suburban Secondary School Principals' Perception of Administrative control in Schools," *Journal of Educational Administration*, 33(3), 14.
- National Association of Secondary Schools Principals (2015), "Ten Skills for Successful School Leaders," <http://www.nassp.org>.
- National Center for Education Statistics, "Educational institutions," Washington, DC: U.S. Department of Education, 2015. <https://nces.ed.gov/fastfacts/display.asp?id=84>
- National Center for Education Statistics, "Public High School Graduation Rates," Washington, DC: U.S. Department of Education, 2015. [http://nces.ed.gov/programs/coe/indicator\\_coi.asp](http://nces.ed.gov/programs/coe/indicator_coi.asp)
- National Center for Education Statistics, "Teacher trends," Washington, DC: U.S. Department of Education, 2015, <http://nces.ed.gov/fastfacts/display.asp?id=28>
- National Commission on Excellence in Education, "A Nation at Risk: The Imperative for Educational Reform," Washington, DC: U.S. Department of Education, 1983.  
<http://www2.ed.gov/pubs/NatAtRisk/index.html>.
- NEA Education Policy and Practice Department, *Reforming High Schools for the 21<sup>st</sup> Century—An Imperative*, Washington, DC: National Education Association, 2008.  
[http://www.nea.org/assets/docs/HE/mf\\_PB06\\_ReformingHS.pdf](http://www.nea.org/assets/docs/HE/mf_PB06_ReformingHS.pdf)
- Perfetto, John et al. (2013). "A Comparison of Mission Statements of National Blue Ribbon Schools and Unacceptable Texas High Schools," *Journal of College Teaching & Learning (Online)*, 10(4), 289.
- Rand Education, "Challenges and Opportunities Facing Principals in the First Year at a School," [http://rand.org/pubs/research\\_briefs/](http://rand.org/pubs/research_briefs/)  
Retrieved on December 23, 2014.
- Sebastian, James and Allensworth, Elaine (2012). "Influence of Principal Leadership on Classroom Instruction and Student learning: A Study of Mediated Pathways to Learning," *Educational Administration Quarterly*, 48(4), 626-663.
- Tschannen-Moran, Megan and Gareis, Christopher R. (2004). "Principals Sense of Efficacy: Assessing A Promising Construct," *Journal of Educational*

*Administration*, 42(4/5), 573-585.

U.S. Census Bureau, “2012 Census of Government Finance –Survey of School System Finances.”

<http://factfinder.census.gov/faces/tableservices/jsf/pages/productview>.

Whitehurst, Grover J. “Russ”; West, Martin R; Chingos, Matthew M; Dynarski, Mark (2015). “The Case for Annual Testing,” *Brookings*, Series: The Brown Center Chalkboard, 94,

Wildy, Helen and Clarke, Simon (2008). “Principals on L-plates; Rear View Mirror Reflections,” *Journal of Educational Administration*, 64(6), 727-738.

## APPENDIX

Table 1  
Number of Public Schools in the United States, 1980/1981 - 2010/2011

Schools	1980/1981	2010/2011	% Increase (Decrease)
Elementary	59,326	67,086	13.1
Secondary	22,619	24,544	8.5
Combined	1,743	6,137	252.1
Others	2,294	1,050	(54.2)
Total	85,982	98,817	14.9

Source: U.S. Department of Education, National Center for Education Statistics, 2013, Digest of Education Statistics.

Table 2  
Public School Teachers, 1990/1991 – 2011/2012  
(In thousands)

School level	1990/1991	2011/2012	% Increase
Secondary	1,118	1,659	48.3
Elementary	1,442	1,726	19.7
Total	2,560	3,385	32.2

Source: U.S. Department of Education, National Center for Education Statistics

Table 3  
Public Elementary-Secondary School System Finances, fall 2011 Enrollment

Item	Amount	Percentage of total
<b>Total</b>	<b>594,531,633</b>	<b>100.0</b>
From federal sources	59,532,214	10.0
From state sources	270,431,959	45.5
From local sources	264,567,460	44.5

Source: U.S. Census Bureau, 2012 Census of Government Finance –Survey of School System Finances.

Table 4  
Public Elementary-Secondary School System Expenditures, fall 2011 Enrollment

(Thousand dollars)

Function	Amount	Percentage of total*
<b>Total</b>	<b>593,818,290</b>	<b>100.0</b>
Instruction	316,590,722	53.3
Support services: school and general administration	37,569,600	6.3
Other support services	142,278,353	24.0
Other current spending	27,524,021	4.6
Capital outlay	50,153,239	8.4
Interest on debt	17,951,538	3.0
Payment to other governments	1,750,817	0.3

Source: U.S. Census Bureau, 2012 Census of Government Finance –Survey of School System Finances.

\* Details may not add up to total due to rounding.

Table 5  
High School Enrollment, 2015

Grade Level	Average Enrollment
9 <sup>th</sup>	388
10 <sup>th</sup>	365
11 <sup>th</sup>	358
12 <sup>th</sup>	335

Source: Principals survey

Table 6  
Principals' Perception of Areas that Demand More Attention by State Officials

Areas Demanding More Attention	Percentage of Respondents
Finance (funding)	78.3
Technology (e.g., computers, software)	60.9
Teachers (e.g., need in specific disciplines)	56.5
Salary (higher salaries for teachers)	52.2
School building (larger/better buildings)	43.5
Facilities (e.g., more and/or better offices)	39.1
Security (e.g., more security personnel)	34.8
School maintenance (e.g., more staff, equipment, or supplies)	26.1
Parking (more parking spots)	21.7
Administrative support (e.g., more clerical or logistical assistance in-house)	17.4
Teacher autonomy and flexibility with respect to teaching subjects)	13.0
Staff members (e.g., more employees are needed for sports activities)	13.0
Rules and regulations (e.g., rigid rules for student disciplines)	13.0

Source: Principals survey