Strategies for Improving School Performance

By

William L. Johnson, Ed.D., LMFT

William.johnson@tylerisd.org

Tyler Independent School District

Tyler, TX 75701

(903) 262-1000

Annabel M. Johnson, Ph.D.

Jared W. Johnson, B.S.

Conference Presentation

2014 Curriculum Conference

June 11-12, 2014

Region VII Education Service Center

1909 N. Longview St.

Kilgore, TX 75662

Strategies for Improving School Performance

By: William L. Johnson, Ed.D.; Annabel M. Johnson, Ph.D.; Jared W. Johnson, B.S.

The rapid development of the United States from raw wilderness and frontier to the leading nation of the world is in itself a marvel. The vast expansion of its population was made possible by the immigration of literally millions of peasants. At first glance, these traditional peasants, largely illiterate, would hardly seem to be the material from which to build a sophisticated society. The chief structural element which made possible this rapid development was the American public school system. In fact, the creed of the early 20th century was the democratic faith in the instrument of the American common school (public school) inherited from Mann (the model of free and compulsory education directly imported from Prussia) and Jefferson but now applied to the problems of training the urban and rural citizenry for jobs, as well as for acculturating the masses of immigrants. Schools were not only an expression of the American philosophy; they were the most effective agent in its formulation and dissemination. Consequently, our educational system took the children of the immigrants, along with the children of the backwoods, and made them rapidly, often in only a generation, into fully American citizens and participants in an industrial society. This success story made possible rapid upward mobility and created our present middle-class society. For all the years of state TAKS and STAAR testing, my students maintained passing rates at very high levels. In this presentation, I want to share several of these strategies that I have used with my classes. I will first examine school culture and a model to build productive school cultures.

Part One: School Culture Past and Present

The Changing School Culture

Considering what American education has accomplished, one must acknowledge today the limitations and restrictions imposed on our public schools: a society that is not scholarly; communities that do not see education as the silver bullet to erase poverty; a media which devalues hard work and degrades the pleasure of learning; and an electronic media that is "rewiring" the structure of students' brains. For example, released on September 17, 2013, Grand Theft Auto Five earned $800 million dollars the first day it was sold and achieved worldwide sales of more than $1 billion in its first three days. Students' writing and math skills are very weak as they are moving away from text and becoming more verbal and visual. At least 41 states do not require schools to teach cursive reading or writing. The issues in education are large and connected to the state of society as a whole. We cannot ignore these effects when we talk about improving education since schools must deal daily with students' social and emotional problems (discipline issues) like student truancy, classroom tardies, fighting, and drugs. According to national surveys, about 17 percent of American high school students are drinking, smoking, or using drugs during the school day.

Furthermore, recent national test-score data showed that fewer than 40% of students met college-readiness benchmarks, only eight percent of African-American students met all four ACT benchmarks, and 71 percent of Texas schools failed to meet NCLB targets. Many politicians label schools as "failure factories." However, they offer no evidence that the solutions they offer – vouchers, more scripted curriculum and testing, and accountability schemes designed to weed out poor teachers – will work, or indeed have ever worked. How then do schools deal with these changes, and how can they achieve at the highest levels?

Building Productive School Cultures

The effective schools systemic model was developed from the original work of Edmonds' (1979) description of the characteristics of effective schools. Understanding of Edmonds' first generation characteristics (correlates) deepened and broadened into the second generation correlates (Lezotte, 1991). Since the first-and-second generation statistical correlations were dependent on sample size, statistical analyses were expanded to include meta-analysis and effect sizes (Johnson & Johnson, 2012b). Principals are very familiar with the effective schools literature; however, what has been lacking is a research-based school culture production model showing how to use this research to implement school change. The following systemic (ecological) model was developed in part to provide a research-based implementation structure for Edmonds' (1979) correlates.

This popular systemic model is used in the United States and internationally in principal training, administrator certification programs, and school management (Johnson & Johnson, 1999b). It provides a framework for the development of schools and also refers to the collective work patterns of a school in the four areas of school-wide planning, people development, program development, and assessment of productivity. This model, based on a review and synthesis of over 400 studies from the school productivity literature and later expanded to over 1000 studies, was developed in a consulting relationship with the authors (Johnson & Johnson, 1999b; Snyder, Anderson & Johnson, 1992).

The authors were looking for common threads that ran through exceptional schools. The research showed that most schools utilized one-or-two of the four components. However, the most productive schools utilized all four components. Interestingly, the most deficient of the

four components found in the research studies was meaningful assessment. In many cases, there was not the expertise to conduct high-level statistical research. Research shows that attending an effectively organized high school is worth at least an extra year's achievement for the students (Brandt, 1990-1991). The systemic school production model shows clearly how to develop an effectively organized school, implement Edmonds' (1979) correlates, increase student achievement, and solve school problems like meeting the federally-mandated NCLB legislation.

Implementing the Work Culture Model

The principal's planning, development, and assessment activities begin by identifying the school's priority needs. These are usually the school's performance levels (typically test scores) and the school's culture (evidenced by the three levels of culture): the physical and social surface environment which can be easily discerned (artifacts); espoused values and beliefs which are conscious strategies, goals, and philosophies; and traditions, ceremonies, and underlying values that reinforce the school's values but exist at a largely unconscious level. Schools that have dysfunctional cultures and poor test scores likely suffer from systemic problems representing a failure at the top levels of school management. The clear goal is to establish priorities (plans) for improvement using the school work culture model.

Educators realize that there are always problems inherent in planning. However, our experience has shown that instead of giving the staff detailed plans and instructions, it is better to communicate strategies as broad intentions of what the school staff can achieve and why it is important. It is also helpful to explain why the previous plans did not work in solving existing

problems. Development processes (developing specific student, staff, or other school needs) that follow planning often begin by using existing school structures like department meetings, PLCs, or special school-wide groups (teams) with specific assignments noting how what they do will be integrated into the school's strategic development plan. Follow this up by routinely having the teams explain what they are doing to accomplish their part of the overall goal.

In many cases, a team will research a specific problem. If the campus is dirty, a team would examine these problems in the context of the school's culture (physical environment) and propose solutions to the principal's Campus Improvement Committee. If the school has a dropout problem, the appropriate team might research the problem and find, as many studies have found, that the best predictor of student dropouts is attendance in the 9th grade, academic achievement (grades) in the 10th grade, and a reading level below the 20th percentile. We have noted situations where schools had borderline 9th graders double up on algebra. The long term benefits included improvement on college entrance exams, better high school graduation rates, and increased college enrollments. Since we know from many studies why students drop out of school, perhaps we should double block reading and math classes for these students? And instead of whole-class instruction, maybe we should divide students into smaller groups based on their needs? Perhaps our three data-driven goals for the year might be in math, reading, and school culture.

Culture Challenges the Principal

Teachers rated classroom experience as the most critical attribute for principals. However, national surveys have found that three out of four K-12 public school principals rated using data

about student performance to improve instruction as the most important experience and skill for principals. Below that, they rated developing strong teachers and evaluating teacher effectiveness as most important. Most principals also believe their jobs have become too complex and often outside their control. This, they feel, has created somewhat of an autonomy gap. In large schools, a breakdown occurs in communication, feedback about performance, and staff involvement in decision making. Therefore, we see principals reorganizing and moving away from the factory school model of the 20th century that was designed to mimic what factories needed in their workers. We see principals empowering collaborative school work groups like PLCs and school academies and delegating more operations to their administrative staff to free up their personal time for strategic school needs. This would certainly apply to at-risk students.

In Title 1 schools especially, the low-SES at-risk students have often internalized the negatives of chaos, disharmony, poor relationships, foul language, and weak vocabulary. Their low test scores often have given a school an "improvement required" state rating. Many of these kids don't have appropriate role models in their lives, and they often don't have the non-cognitive skills (such as organization, self- control, and resilience) vital for academic success. They live for their friendships, and this is often their only motivation for attending school. My experience has shown if students come to schools where they feel valued, safe, and that the teachers have their best interests at heart, they will commit themselves and work harder. There will be fewer distractions and discipline problems, and the students will learn more. Isn't it all about how people treat each other: respect, responsibility, honesty, and compassion? I describe this as "things of the heart" that connect with students emotionally, not only academically. Begin by

greeting students as they enter the classroom. Also, regularly communicate with the students' parents or guardians.

Instead of focusing first on tests scores and curriculum to get the outcomes we want, perhaps we should first examine our school culture by using climate surveys (Johnson & Johnson, 1999a) and assessing the social and emotional status of our campus. Maybe school dropout rates, lack of student motivation, teacher absenteeism, and graduation rates are really only symptoms of a troubled school culture. Perhaps we should emphasize a developmentally appropriate set of learning traits at a designated time of the school day or week. This will help students, especially those in Title 1 schools, with social-emotional problems in self-regulation, stress management, and empathy. "Soft skills," such as getting along with others, communication, persevering, dealing with setbacks, and problem solving are foundational to academic achievement and are built over time in settings through relationships. Is school a place where everyone enjoys being, or are students really just "reluctant prisoners of the classroom." Perhaps we need to train all the school staff in social-emotional development, culture, and how to build relationships. It is a tragedy that all school staffs are not equipped with this critical neuroscience knowledge. Principals are also very concerned about student testing. This is the next discussion.

Assessment specialists deplore what is called the "frozen" test scores reflected in results from national testing programs. SAT reading scores are 10 points lower now than in 2001 when then-President George W. Bush signed the "No Child Left Behind" legislation that increased student testing nationwide. In the past decade, federal and state education policies have

focused primarily on efforts to raise standards, improve assessments, and evaluate teachers. However, results have shown clearly that these are not effective drivers toward significantly changing the conditions for students. The SAT College and Readiness benchmark, for example, has remained virtually unchanged over the past five years. This has prompted critics to contend that federal testing policies are not the vehicle capable of generating systemic change. Just look at all the waivers being issued to the states. Research shows that testing does not educate students without the organization, resources, and trained workforce to meet the standards. Furthermore, the purpose of testing is not to focus on student failings but on how to improve student instruction. Assessments are critical tools to guide teachers in improving their lesson plans and framing their instruction. Educators know excessive testing each year has cost teachers a month-or-more of teaching time for student test-preparation and test-administration. What is foundational to school success is a school culture (learning environment and conditions) that maximizes students' opportunity to learn and succeed. Using test results to frame student instruction is another example of a topic that might be operationalized in the work culture model.

From my research and observations of great schools, it now seems to me that a school's future success rests on agreement of a vision for the school; a school work culture production model that utilizes all the components of planning, development and assessment; the principal's collaborative team support from the entire school community; and the use of data to support a culture of continuous improvement. There may be many paths to continuous school improvement; however, there is the same basic approach as the extensively researched school work culture model: analyze, plan, implement, and evaluate. Then start the cycle all over

again. I have found that the most productive principals let data drive their decisions, aligning objectives and goals, and focusing on achievable goals through existing school structures while monitoring results. They are willing to challenge the status quo to build a new type of learning environment. The great principals are much more likely to take risks and let their teachers take risks. The most school improvement takes place when data (from staff, students, and the community) are shared transparently and real changes are made in response.

In the spring semester, we see principals addressing the effectiveness of their schools' yearly change processes and using assessment data in their feed-forward planning loop for the next year's work culture cycle. Unfortunately, there are many districts that do not take full advantage of their data are giving up the opportunity to manage strategically and make timely course corrections. There seems to be a general lack of expertise in using data to guide strategy (Johnson, Johnson & Johnson, 2012a). I have great hope, through all the school's collaborative efforts, that schools can create school cultures in which all students have an opportunity to learn and succeed. There are thousands of dedicated teachers and administrators who love students and teaching and believe it is their responsibility to be successful in leading their students to learn, to be better people, and to pursue challenging futures. From the school leadership and management literature, there is probably no one best way to lead and manage all organizations. However, my experience in the public schools has shown that a concern for others (relationships) and a focus on student success is the best style that will work for administrators and teachers in the majority of schools. This presentation will focus next on strategies for student achievement (Johnson & Johnson, 1999b, 2010, 2012b). After all, a poorly managed school may be a major reason for a school receiving a poor rating.

Part Two: Productive School Management

Schools, districts, and states are obviously under great pressure to improve student performance. Increased scrutiny by state legislatures, the media, business, and special interest groups has made school improvement and student achievement a top priority. In 2001, the federal government expanded its role in public education with new legislation motivating annual student performance testing, teacher improvement programs, and a plan to identify underperforming schools. It is now even more urgent that Texas school officials address the weaknesses of their present instructional programs and adequately prepare students for the new educational requirements. Given the complexity of educational systems, many researchers posit using systems strategies to address educational needs.

General Systems Theory

A system is defined as a group of interdependent items that interact regularly to perform a task, an established or organized procedure, or a method. A system is also defined as an arrangement (pattern or design) of parts which interact with each other within the system's boundaries (form, structure, or organization) to function as a whole. The nature (purpose or operation) of the whole is always different from, and more than, the sum of the unassembled collection of parts. As noted, a system brings together parts or members into a relationship that adds up to a whole. Furthermore, the whole is often a common way to then look at or study the system itself.

At a more technical level, a system can be said to consist of four elements. The first is objects: the parts, elements, or variables within the system. These may be physical, abstract, or both, depending on the nature of the system. Second, a system consists of attributes: the qualities or properties of the system and its objects. Third, a system has internal relationships among its objects. Fourth, systems exist in an environment. Thus, a system is a set of things that affect one another within an environment and form a larger pattern that is different from any of the parts.

In 1990, Senge wrote that the ways organizations think about the world are built on systems thinking. A systems model provides a framework from which an organization can see the patterns and interrelationships that surround its particular problems and help solve those problems much more effectively. Furthermore, a systems model is necessary when attempting to find long-term solutions since linear thinking often results in short-term solutions that may prove to be ineffective over time (National Staff Development Council, 1995). That model must now be superseded by the more complex systems model since the classical model was designed historically for much simpler societies. The systems model allows individuals in organizations to work together instead of working competitively. Working together, individuals become aware of the value of the interconnectedness that exists in the world, and they experience the dynamic energy that is released using systemic models.

Interestingly, our culture refers to schools as school systems since there are interdependent functioning administrative units like payroll, transportation, personnel, and curriculum. Unfortunately, for many districts this is where systems theory ends. What is urgently needed is to apply systems thinking operationally throughout the school district. Next, there will be a discussion of research-based systemic models that have been shown to improve student success. The leadership challenge for school administrators and teachers is to effectively implement one or more of these systemic models.

Effective Schools Systemic Model

For more than two decades, many Texas school districts have relied on the effective schools research as the framework for managing and improving their schools. It was the late Ronald Edmonds' (1979) description of the first-generation correlates of effective schools that launched the effective schools movement in the United States. The effective schools movement has been a major force in American education, and it continues to exert enormous educational influence today. Furthermore, today we see many districts expanding the first-generation correlates to include the second-generation correlates. Following is a summary of both the first- and second-generation correlates. Following is a summary of both the first- and

second-generation correlates of effective schools (Edmonds, 1979; Johnson, Johnson, Hunt & Gilliam, 2002).

Shared Vision and Purpose – In the first-generation correlates it was noted that effective schools have a clearly stated and focused school vision, including the school's curricular and instructional goals and priorities. While the first-generation correlates focused on teaching students, the second-generation correlates will focus on learning for everyone in the school. For example, there can be morning and afternoon tutorials and off-campus test preparation for students who are projected to fail state testing.

A Safe and Orderly Environment – The first-generation correlates focused on a school climate that was free from physical harm and was not oppressive to teaching and learning. For the second generation, learning for all will imply a positive, cooperative, collaborative learning environment for both students and adults. For example, the teacher might divide the class into three-or-four groups by ranking the students' scores from highest-to-lowest and choosing students sequentially from each grouping to be placed in groups for class work.

Instructional Leadership – In the first generation, the principal managed the school's instructional program in addition to the daily management duties. In the second generation, top-down bureaucratic management will be replaced by bottom-up leadership that is driven by a vision of success and encourages shared decision making. The instructional leadership role of the principal and the administrative staff will be broadened to include all the campus staff. All teachers will become instructional leaders. Districts may also employ curriculum specialists at campuses to help teachers in various departments. In the principal's instructional leadership role, the distinguishing characteristics will be a set of attitudes and beliefs (symbolic aspects of leadership) rather than just a set of skills and behaviors. Some see principal certification changing to a curriculum focus instead of a management/business focus.

High Expectations for Students – In the first-generation correlates, all students were expected to master the essential academic skills. In the second generation, the expectations will be broadened significantly to implement additional teaching strategies to ensure that all students achieve academic mastery. It is estimated that a teacher needs ten years and 10,000 hours of teaching experience to become a master teacher. Master teachers know how to move their students to exemplary learning and achievement.

Student Time of Task – In the first generation, a large amount of class time was devoted to instruction in essential skills and content mastery. With state testing and federal legislation,

teachers will have to spend more time prioritizing curriculum content. As we all know, much teaching today focuses on what will be tested on the end of course tests.

Monitoring Student Progress – In the first generation, a variety of assessments were used to improve both student performance and the instructional program. In the second generation, we will see a greater emphasis on curriculum alignment and the use of technology to monitor student progress. We will see a greater use of curriculum-based, criterion-referenced measures of student progress and less use of standardized norm-referenced tests. We will also see the implementation of comprehensive, customizable, and user-friendly systemic curriculum management systems built on the most current research-based practices. As will be noted later in this presentation, the author will illustrate both low-tech and high-tech strategies to monitor student progress and prepare for state EOC testing.

Positive Home-School Relations – In the first-generation correlates, parents were reluctantly brought into the school to help the school achieve its mission. In the second-generation correlates, there will be a genuine effort to establish an authentic partnership between the home and the school. Team building, trust, and communication are critical in establishing authentic partnerships. Teachers are being asked to greet their students at their classrooms each period and stay in touch with the students' parents, especially the parents of students who are failing. In many successful schools, teachers turn in their parent communication logs at the end of each six weeks or semester. These logs are used as a part of their evaluations.

Districts should begin the school improvement process by conducting surveys, collecting data, and asking the following questions: what is our vision/mission; what are our school's goals; who are our customers; what do our customers value; what have been the results of our previous endeavors; and what is our plan for addressing our school-and-student needs. Setting measurable school goals and devising plans to accomplish those goals will likely be the most positive and the most difficult tasks schools will face. The key is making data-driven decisions. The effective school correlates provide a time-tested comprehensive framework for identifying, categorizing, and solving the problems that schools and districts face.

The implications of the second-generation correlates are thought provoking. For example, are the current preparation programs for school administrators missing the point? Should current school administrator preparation programs be changed from an emphasis on management and administration to an emphasis on teaching and learning? After all, school improvement is really about learning first, teaching second, and then everything else

supporting those functions. Perhaps instructional leadership should be replaced with learning and the pedagogy that produces required learning outcomes. Generally speaking, poorly performing schools are places where not much learning is going on. The imperative is based on more in-depth knowledge of what is actually required to systemically improve teaching and learning. Professional learning communities (PLCs) properly designed, can accomplish much of what is really required.

Ironically, it's interesting to consider this in the context of teacher autonomy. Although teachers may think they have a lot of autonomy, they really don't. After all, the district chooses the curriculum; the principal supplies the budget; and school rules are well established before teachers begin to teach. Consider the structural arrangement and authority of many university academic departments. Most high school departments, in reality, have very little authority. One possible solution is the establishment of properly-functioning public school PLCs. This would include professional development within the PLC. The author, at this time, has seen little of this happening in public school PLCs.

Another issue is the definition of school reform. Many posited school reforms include things like getting new textbooks, school construction, changing administrative categories and duties, revising course descriptions, or linking teacher evaluations to test scores. If reform means improvement or transformation, then the "current reform movements" are often really not reform movements. Thus, as noted above, how will PLCs be empowered to do what it is posited they should really do to bring about meaningful school change?

School Achievement Patterns

The author has observed in exemplary schools that productivity is inextricably linked to four interdependent components: planning, people development, program development, and assessment. These components provide the foundation for more fundamental statements about productive schools in the global age (Snyder, 2005; Snyder 2006). I refer to these components as elements of school work culture.

Planning – Principals and teachers together transform common concerns into specific goals. Planning tasks include organizational goals that relate to primary outcomes and visions for the

schools (Snyder, Anderson & Johnson, 1992). Tasks are dispersed to permanent and ad hoc working groups. Peters and Austin (1985) found the intensity of leaders' commitment to organizational goals was the chief difference between the great and not-so-great organizations.

Professional Development – Development plans that are linked to organizational goals have the power to enhance individual and group performance (Johnson, Snyder & Johnson, 1991). Teams become learning centers as school managers and employees share, plan, act, and critique programs and coach one another. As organizational structures flatten, teams are replacing many hierarchical structures. For a team to perform well, the core tasks that move it toward its goals must be interdependent. Its members must work together very well, and each team member must understand the others' strengths and weaknesses. Also, professional development activities which account for 40-to-60 percent of the total variance of student achievement after taking demographics into account (Darling-Hammond, 2000) is the most important component of a school's culture. In a study of 900 districts, Ferguson (1991) found that teacher expertise accounted for 40 of the difference in student achievement in math and reading. This would parallel the findings today that it takes ten years and 10,000 hours of teaching experience to foster an exemplary, master teacher.

Program Development – Program development plans that are linked to a school's goals address challenges by coordinating program development, implementation, and evaluation activities (Chrispeels, 1992). School leaders who agree on a common purpose for educational outcomes and work in a cooperative team effort to reach their goals experience higher student achievement than those who do not (Kaplan & Evans, Sr., 1997). To have effective team collaboration, there must be a high degree of confidence, trust, and open communication. Furthermore, teamwork is enriched when team members are treated as equals. This is a consequence of an effective PLC.

Productivity Assessment – Assessment guidelines focus on progress, standards, and student-growth expectations. All systems need feedback to remain viable, and feedback requires information about student success in relation to the purposes, goals, and output of the school. Successful schools are those that are designed to improve student learning by participating in on-going planning and evaluation (Johnson & Johnson, 2012b). This can be handled by the principal's Strategic Planning Committee with the help of an effectively organized PLC.

The expansion of the school excellence literature shows that administrators and teachers together must assume responsibility for changing students' achievement patterns. Resources, information, opportunity, involvement, support, collaboration, planning, development, and

assessment are vital materials and forms of power that fuel school productivity. A typical production model might divide the school year into three parts: planning (September/October), staff and program development (November through April), and evaluation (May and June). From the author's research and observations of exemplary schools, it now seems that a school's future success rests on agreement about a school's vision and a systemic model for improving student success. My experience in the public schools has also shown that a concern for others (relationships) and a focus on student success is the one best leadership and management style that will work for the majority of schools. Built on a systemic relationship model, if needed or desired, one can implement other systemic models like the effective schools systemic model or the school work culture systemic model. Whatever is done, one must remember that all systemic models must focus on promoting norms of collegiality that respect individuality and collaboration among all members of the school community. This collegiality will be evidenced by support, trust, confidence and credibility, openness and candor, interpersonal skills, team building, opportunity, accountability, empowerment, total quality, participative decision making, and an emphasis on high performance goals. Successful school change will require the collaborative support of the entire school community. Furthermore, effectiveness with people is the key to increased efficiency, productivity, and the growth of our schools.

Part Three: Classroom Programs and Strategies

In this section, I want to discuss relationship management and student motivation. For the past several years, I have used three basic strategies for classes: greet the students at the door when they enter each class; write the lesson for each day on the board; and stay in contact with the parents (especially for those who are failing). It is a given that we work every day in class. I believe that approximately 50 percent of my students' success has been directly related to the curriculum we teach in class with the hands-on approach and class discussions that were tied to science theories and concepts linked to real-world applications; 25 percent to relationship management (with the students, including calling and e-mailing parents); and 25 percent instructional/test strategies. This applied especially to how to "decode the state TAKS and STAAR tests." I refer to these areas as exocurricular factors. Referring to the planting of seeds

of success, the Swiss psychiatrist Carl Jung once stated: "The curriculum is so much necessary raw material, but warmth is the vital element for the growing plant and the soul of the child."

From several years of teaching, I have observed that schools are not buildings, time tables, and technology. At the most fundamental level, schools are about relationships. In their study of school involved in substantive change, Spillane and Thompson (1997) referenced the research of the economist, J. Coleman (1988), that "local capacity" for substantive change is based on three things: (a) physical capacity (financial resources), (b) human capital (administrators and teachers), and (c) social capital (internal and external district relationships). Ball and Cohen (1995) wrote that physical capital is observable, but human capital, represented in the skills and knowledge of individuals, is less tangible. And last, social capital, represented in the relationships among persons, is even less tangible. Ball and Cohen (1995) noted that human and social capital is the essential element in understanding what makes a school exemplary.

Writing in the September 2004 issue of *The School Administrator*, Jim Peters, former superintendent of the Shelby, Michigan Public Schools asked which elements made the difference in a highly successful and a less successful school: involved parents, socioeconomic status of students, a highly trained staff, or a caring environment where everyone felt connected and respected. Peters noted the answer was all of the above; however, he commented that parental involvement and SES were outside the control of the schools. Dr. Peters explained that his district had received numerous state awards for exemplary student achievement. He noted that his district's highest achieving schools were those where the students and teachers trusted, respected and cared about each other. This was also true for his principals and their staffs: they trusted, respected, and cared for each other and worked toward the same goals of student success. This is a key idea behind pubic school PLCs.

As his district made connections and relationships a district wide focus, more of their schools received Michigan's highest awards for student achievement and improvement. Overall, Peter's administrators worked with their staffs to support three district wide objectives: every student was greeted as he or she entered the classroom; every teacher posted a daily agenda in the classroom; and every teacher made at least two positive calls or parent contacts each week.

Administrators also made greeting students a priority, had agendas for all meetings, and made positive contacts with students, staff, and parents. These ideas make a lot of sense to the author. I have observed when teachers get to know their students, build positive relationships and work to make their classes enjoyable places to work and learn, then their students have excelled both academically and socially.

Having observed the results of positive school environments, Johnson and Johnson (1995) studied the second-order factor structure of the Charles F. Kettering School Climate Profile (CFK), a popular measure of school climate. The authors found that the higher-order structure of the scale was composed of two factors: cognitive and affective components. The emotional components were comprised of respect, trust, morale, and student input questions. These emotional components are essentially the characteristics that Peters observed in his district's exemplary schools. These characteristics are fundamental relationship components that foster a sense of school community, cooperation, and student achievement. In class, I have focused on achievement (hands-on lab activities and discussions) and relationship management. I've greeted students at the door, put daily agendas on the board, and generally made about 75 parent contacts each six weeks. I've felt relationship management was a missing dimension in student achievement. I've also felt that "decoding the TAKS and STAAR tests" was a real key in achieving high passing rates on the state tests. More about "decoding the tests" will be provided in the presentation.

Test Strategies for State EOC

Finally, there was one more area I addressed. This might be called instructional and test strategies. I knew from the research literature that the single most effective instructional strategy was teaching students to compare and contrast (identify similarities and differences). To compare and contrast, students must work with information at high levels of Bloom's taxonomy. Examples would include teaching use of the periodic table by comparing and contrasting metals and nonmetals. I explained Bloom's Taxonomy of Knowledge and Lynn Erickson's Structure of Knowledge to show how the science TAKS and STARR tests were designed. I told my students my estimate of the number of questions needed to pass the yearly

state tests and gave them strategies for answering questions. I found many students had no idea what to do if they didn't know the answer to a question; thus, I shared specific heuristics for answering questions and modeled using the heuristics. I also gave each student a summary sheet of their past scores, noting areas of strength or weakness. I then gave all my students remedial material based on their past scores.

I next shared my high school's previous state science TAKS summary test scores. I found, for example, if students answered 10 or more questions correctly on objective one (out of the 17 questions on the first objective), then 95% of our students passed science TAKS. If they answered less than 10 questions correctly of the first objective, they still had an excellent chance to pass science TAKS if they answered seven or more questions correctly on objective five. For our students, objective five had been the easiest objective to raise test scores. This information provided strategies for the students. I also had questions about the factor structure of the science TAKS test. Therefore, I conducted a factor analysis of our pool of TAKS scores (Johnson & Johnson, 1995). I shared the statistical findings with the students and showed them the significance of further clarification of the test structure.

Furthermore, I explained why students often fail science TAKS. Reasons included: class attendance, student background, students' analytical skills, science vocabulary, language problems, and an inability to plan, organize, and project one's life into the future (versus living only in the present). Some of the students in the classes had failed every science TAKS test they had ever taken. The seniors were especially burdened with anxiety, fear, and self-doubt since failure to pass TAKS meant they would not graduate with their senior class. No wonder so many of these students checked out of school, many of them bored, angry, and deliberately not learning. I observed that dealing with interpersonal skills was a key in getting these students again involved in the learning process. Many of these students were at-risk students who survived friend-to-friend. They are the sensing/feeling and intuitive/feeling personality types on the Myers Briggs Type Indicator (MBTI). To connect with these students, one must use empathy, be genuinely concerned, and empower the students. Caring comes first with most of these students. See www.personalitytypes.com for additional information about personality

types. It is little wonder that teachers holding credentials in the field in which they teach, the teachers' experience and education, and the teachers' professional development are so important for student success.

In 2011, our district employed a campus science instructional specialist who worked with the science department. The specialist developed five objective tests (with SE categories) for all science classes and implemented a data scoring and reporting system. The TAKS objective test assessment for objectives 1-5 was implemented the second semester. A new objective was tested, scored and tutorials taught every two weeks. Also, the school science specialist conducted morning, noon and afternoon tutorials for students who didn't score at the 70% passing level for each objective. Teachers also covered designated SE content at the beginning of their classes and gave credit for each SE if students completed the class work. Beginning two weeks before the spring TAKS test, science teachers spent each class period reviewing for the TAKS test. Each teacher prepared a review plan for the science department chairman. The plan justified what was to be covered in the two-week review period. The plan was based on student assessment scores. For that year, the science TAKS passing rate for students at Robert E. Lee was as follows: African American 69%, Hispanic 81%, economically disadvantaged 74%, white 92%, and all Lee students 84%.

Strategies Contributing to Student Success

Considering the year's activities, following is a listing of strategies that contributed to the students' success: (1) the science preparation program; (2) final exam exemptions for all students passing science TAKS in addition to their meeting the district's rules of a 70 semester average and adherence to the attendance/suspension school rules; (3) following Jim Peter's three points; (4) explaining test development as applicable to the science state tests; (5) special education techniques helpful to inclusion (IN) students; (6) distribution of a one-page science TAKS summary sheet for all students listing their previous science TAKS scores by objective and extra-credit remedial objective assignments if requested; (7) teachers doing a summative evaluation detailing science TAKS material to cover during the two weeks prior to spring TAKS testing; (8) the district's computerized AWARE system listing all students past and present

district and state assessment scores; and (9) teachers turning in their parent phone logs to their assistant principals at the end of each six weeks.

Areas to Further Explore

Following are areas to consider in the school's improvement plans: (1) student attendance at morning, noon or afternoon objective tutorials; (2) guidelines for requiring additional science STAAR work for weak students; (3) correlation of district assessment test scores with the actual science objective and composite STAAR test scores; (4) science program revision considering the Texas Senate bills regarding testing (as the testing debate continues in Texas); (5) teaching strategies for inclusion students; (6) teaching thinking skills; (7) teacher summative reports listing which students failed science STAAR and why the teacher thought they failed; (8) a time line detailing what data was really needed, and by what time, for predicting statistically if students would pass or fail the STAAR exams; and (9) score reliability and validity measures for the district's assessments. I also calculated the standard error of measurement for some of our district's benchmark tests. Interventions should be 'put in place' to deal with the expected failures. This will eliminate a lot of testing that may not really be needed. At a minimum, teachers should be asked to list which students they think will fail science STAAR and why they will fail. By midterm, most teachers have a very good idea about which of their students will pass or fail the state tests. Realistically, it will take some students more than one year to pass. For some students, if they leave class at the end of the year identifying with the teacher, the teacher will have been successful with that student for the year. If our science passing rates are to increase, we need to look closely at which students will likely fail (and why). We need to statistically determine passing benchmarks by specified dates. There is much more to raising test scores than just telling the teachers that test passing scores are going up and they had better work harder (as though most teachers are not working day-and-night and weekends). Such statements show a systemic failure at the leadership level.

Using these strategies outline in this presentation, the science faculty at Robert E. Lee has been very successful. However, we must seriously examine why students fail and what specifically can be done at what time during the year to reduce the failure rate. We obviously

have answered a large part of the question with the programs and strategies that have been implemented.

Summary of Programs, Strategies and EOC Scores

School:

Science Specialist (instructional consultant), helps with curriculum, has tutorials, etc. District science staff prepares unit assessments and part of the final examination. Teachers prepare weekly assessments.

STEM training sessions for all science teachers. Math-related questions coming more into science EOC testing given low math scores in many districts.

AWARE district computer system for recording test scores by SE.

Query for needed supplies each six weeks.

There are ten Lab Quest units and 30 TI-83s for all science classes.

Holt, McDougal Little science supplemental materials are used.

Teacher:

Six week lesson plans for chemistry outlined in PLC from district curriculum. There are teacher tutorials three times a week (before or after school).

Relationships with students: those who often fail focus on relationships with other students. From the Myers Briggs, the split is 12% vs. 88% for thinking vs. feeling student profiles (ESTJ vs. INFP). The feeling group lives day-to-day for their relationships. This includes student characteristics like: affiliation/affection; belonging; the now vs. the big picture; caring comes first; what value is this to me; and friend-to-friend relationships. The thinking group is interested in what and why; the feeling group is interested in why not and so what. Adapted from "Instructional Strategies for Maximizing Learning," Harvey Silver and Richard Strong. Engage the mind and emotions.

Big four: Teach every day in class; greet students at door; put daily lesson plan on the board; contact parents (at least two calls per week).

Exocurricular factors like strategies for test taking. Being at the door during class changes has reduced campus referrals by 50%.

Teachers summarize ELA/TELPAS scores for students with failing language scores and file a report on each of these students once each six weeks.

Also, I published a logistic regression article looking at the correlation of the students' previous science TAKS scores with their STAAR scores. In 2013, the correlation between my students' science TAKS scores and the field test for the chemistry STAAR test was 0.80. I wrote a logistic regression program to calculate the probability students would pass or fail the STAAR chemistry test based on their science TAKS scores. This is an example of high tech analytics.

My definition of lecture is teaching then stopping to ask questions of the students, take student questions, do a science demonstration, etc. This is not the typical definition of lecture.

Aim at higher level thinking. Use heuristics. If students do not know the answer to a question, tell them to go to something they know. It might be the periodic table or a formula. I've found compare and contrast (similarities and differences) is the best way to teach conceptual (generalized) higher order thinking. I also focus on reflection and abstraction.

In the spring, the science instructional consultant conducted two-to-four pullout chemistry classes for students who failed first semester chemistry (students recommended by their first semester teachers).

In the spring, the instructional consultant began a special accelerated instruction program (STAAR intervention) for those students who needed math and science STAAR help. Students were pulled out of an elective class twice a week.

Make your class really interesting. Use Abelard's engagement method to get the students interested in the daily class work. From Abelard's ideas, we get our engage, explore, explain, elaborate and evaluate (5E) model. Following are sample questions or topics that a used to generate student interest and engagement. From string theory, how many dimensions are there in the world; what happens if you travel beyond the speed of light; is time travel really possible, and how can one travel back into the past or into the future; is this like dreams coming true; how did a man in a coma sit up in his hospital bed and right before he died tell his family the winning numbers for the upcoming New York State lottery….the largest ever state lottery in New York State history; is this like remote viewing that was developed by the CIA; what about Area 51; if you drop a penny, what is the frequency of the sound and is it in the RF range; is your student desk comparatively as empty as the night sky; are there other explanations to explain why matter is a solid, liquid or gas; when you are standing, you are not touching the floor…you just think you are; Einstein said in 1905 there was no speed faster than light: that year scientists found the first speed faster than light; if all the space in your body was not there, you would be the size of a pea. What would you need to do to walk through a wall or a closed door; why does light pass through a window glass. On some trains in Europe, you can now listen to AM or FM radio by leaning up against windows on the train. All the computers to the world linked together would be the equivalent of one human mind. There are 10 to the 23 power of water molecules in a thimble of water, but there are only 10 to the 46 power of water molecules in all the oceans of the world. One breathes 10 to the 22 power of molecules of air in each breath, but there are only 10 to the 44 power of molecules in the atmosphere of the earth. Students' understanding of exponential powers is very limited. The bone marrow of a person of average weight synthesizes approximately 500 trillion molecules of

iron-containing hemoglobin per second. Furthermore, there are about 250 million hemoglobin molecules in every red blood cell in the body. We will die of a heart attack if adequate oxygen isn't given to our cells, and the brain will be permanently damaged or death will result.

Chemistry, biology, and physics planning documents for the science STAAR tests are due in October of each year. Science TAKS post-analysis reports are due from every science teacher for his/her classes before the end of the year. The report is to include statistical analysis: t-tests, secular trend analysis, logistic regression, first- and second- order factor analysis, etc., as the teacher can prepare.

Save Our Students (SOS) classes were implemented for the sophomores who failed the STAAR test, and there was a similar strategy for special education students.

Ways to handle minor behavior problems:

1. Communicate class rules and expectations
2. Call parent or talk with a coach
3. Walk over to the student's desk and stand beside the student
4. Use humor to defuse the situation
5. Use the stare of death
6. Give detentions
7. Don't say "be quiet," but something like "Everyone, the room needs to quiet down right now because I'm really losing my patience with you"
8. Last but not least – send the student to the library if necessary.

Student:

Several students are from broken homes and have behavioral and emotional problems. Many schools find test scores in the 7th grade identical to scores in the 9th grade (lost years). Students with emotional or behavioral disorders [Code of Federal Regulations, Title 34, Section 300.7(c) (4) (i)] display some or all of the following characteristics: (a) an inability to learn that cannot be explained by intellectual, sensory, or health factors; (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (c) inappropriate types of behavior or feelings under normal circumstances; (d) a general pervasive mood of unhappiness or depression; and (e) a tendency to develop physical symptoms or fears associated with personal or school problems.

Special education techniques: group work and media use (Lumens, internet, etc). Credit recovery for students who failed a class or classes is handled through special classes utilizing the PLATO computer system.

Student journals AVID format for daily notes is very good (effect size of one in studies). The effect size of media use is 0.3. An effect size needs to be greater than 0.4 for school implementation of any specific strategy.

Previous science TAKS: if students got > or = 10/17 objective one, 95% passed the science TAKS; if not, if they got > or = 7 on objective five, they passed the TAKS science test. We find that objectives two and three (biology) do not fail our students. Objective five (the 15 physics formulas) is the easiest objective score to increase. Thus, previously we focused our chemistry TAKS reviews on objectives one, four and five. Science TAKS prep starts full time three weeks before the state tests. The chemistry EOC STAAR chemistry state outline follows: objective one Nature of Science, 8 items (16%); objective two Matter, 14 items (28%); objective three Atoms, Bonds and Nuclear Processes, 10 items (20%); objective four Transformations of Energy, 8 items (16%); and objective five Solutions, 10 items (20%). There was a total of 50 items. As of 2013, chemistry no longer had STAAR end of course testing. However, this type of low-tech analysis can be applied to all the other disciplines that take EOC STAAR state tests.

Two unit assessments were given each six weeks. These are the three weeks and six weeks tests. If a student scored higher on the unit retests, the second test grade replaced the previous test grade.

Students like labs and discussions. Students react positively to media and worksheets.

Three things hurt a lot of students: previous memories (thoughts); emotional baggage; and poor relationships.

Non-cognitive skills are vital to academic success: organization (ex. notebooks); self-control; resilience; stress management; and empathy. These are reasons some students have trouble in class versus academic problems solely.

Program Success:

As an illustration of EOC TAKS and STAAR test results for the program, consider the following. In 2011, the last year of EOC TAKS testing, the science department mean for all the Caucasian students passing the TAKS science test at Robert E. Lee High School was 80%. My Caucasian students' passing rate was 96%. My passing rate for African American students was 14% higher than the department passing rate. My passing rate for economically disadvantaged students was 16% higher than the department passing rate. And my passing rate for special education students was 29% higher than the department passing rate. This is also significant in that I had inclusion (IN) special education students. In one recent year, I had one-third of all the special education students taking chemistry.

Furthermore, in the last and only year of STAAR state chemistry testing (because of changes in the state law of Texas) with all my students being on-level, inclusion (IN) special education students, economically disadvantaged (EDS) students, limited English proficiency (LEP) students, and 504 students, I had more commended students on the chemistry STAAR state test than any other chemistry teacher at Robert E. Lee. This was in comparison to teachers with largely pre-AP, AP, and IB students. These results indicate that my students made significant academic progress by my using the three-tiered program components noted in this document.

References

Ball, D.L., & Cohen, J.K. (1995, April). *What does the educational system bring to learning a new pedagogy of reading or mathematics.* Paper presented at the annual meeting of the annual meeting of the American Educational Research Association, San Francisco.

Brandt, R. (1990-1991). On local autonomy and school effectiveness: A conversation with John Chubb. Educational Leadership, 48(4): 57-60.

Chrispeels, J.H. (1992). *Purposeful restructuring: Creating a culture for learning and achievement in elementary schools.* Washington, DC: Falmer Press.

Coleman, J. (1998). Social capital in the creation of human capital. *American Journal of Sociology,* 94, S95-S120.

Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives*. No 1. Available http://olam.ed.asu.edu/epaa/v8n1/.

Edmonds, R. (1979). Effective schools for the urban poor. *Educational Leadership*, 37, 20-24.

Ferguson, R. (1991). Paying for public education: New evidence on how and why money matters. *Harvard Journal of Legislation* 28.

Johnson, W.L., & Johnson, A.B. (1995). Using SAS/PC for higher order factoring. *Educational and Psychological Measurement*, 55(3), 429-434.

Johnson, W.L., & Johnson, A.B. (1999a). Assessing perception of school climate among Jordanian students in English-speaking schools. Psychological Reports, 84, 395-397.

Johnson, W.L., & Johnson, A.B. (1999b). World-class schools in the 21st century. *Bulletin*

National Association of Secondary School Principals, 83(606): 26-31.

Johnson, W.L., & Johnson, A.B. (2010). An innovative program that results in science school improvement. *Texas Study of Secondary Education,* 19(2), 21-23.

Johnson, W.L., & Johnson, A.B. (2012a). Predicting student success on the Texas chemistry STAAR test: A logistic regression analysis. Retrieved March 14, 2014, from www.google.com.

Johnson, W.L., & Johnson, A.B. (2012b). Preparing for the STAAR test: The third generation correlates of effective schools. *Texas Study of Secondary Education*, 21(2), 5-8.

Johnson, W.L., Johnson, A.B., Hunt, M.J., & Gilliam, B. (2002). The second generation correlates of effective schools. *Texas Study of Secondary Education*, 11(1), 3-6.

Johnson, W.L., Snyder, K.J., & Johnson, A.B. (1991). Instructional leadership for productive schools. *Teacher Education and Practice* 1, 51-58.

Kaplan, L.S., & Evans, M.W., Sr., (1997). Changing school environment: Restructuring one Virginia high school. *NASSP Bulletin*. 81(589), 1-9.

Lezotte, L.W. (1991). Correlates of effective schools: The first and second generation. Okemos, MI: Effective Schools Products, Ltd.

National Staff Development Council. (1995). *Standards for staff development.* Oxford, OH: Author.

Peters, J. (2004). School environment: Putting staff No. 1 connects students. Retrieved August 30, 2009, from http://www.aasa.olrg/publications/saarticledetail.cfm?mni number=&pf=1&snitemnumber=.

Senge, P. (1990*). The fifth discipline: The art and practice of the learning organization*. New York: Doubleday.

Snyder, K.J. (Fall 2005). Leading schools into the global age: The challenge of our times. *Wingspan Journal*, 15(1): 12-26.

Snyder, K.J. (Fall 2006). School becoming global learning centers: The challenge and opportunity of our times. *Wingspan Journal,* 16(1): 73-83.

Snyder, K.J., Anderson, R.H., & Johnson, W.L., (1992). A tool kit for managing productive schools. *Educational Leadership,* 49(5): 76-80.

Spillane, J.P., & Thompson, C.L. (1997). Reconstructing conceptions of local capacity: The local education agency's capacity for ambitious instructional reform. *Evaluation and Policy Analysis,* 19, 185-203.

Bios:

Dr. William Johnson, a patentee in chemistry, teaches chemistry at Robert E. Lee High School in Tyler, Texas. Having served as a consultant in industry/education and published over 250 articles, he has an enduring love for education and students. While earning his doctorate from Texas Tech University, he was a Jones Fellow. Annabel M. Johnson, Ph.D., is a former university professor and administrator. She has a Ph.D. from Texas Tech University where she served as Acting Graduate Dean of the College of Family Studies while she earned her Ph.D. degree. Jared W. Johnson, B.S. in Business, is a graduate of Stephen F. Austin University. He played on golf teams all four years of college. He is an expert in the areas of computer design and graphics.

Appendix

KTBB Article

Tyler ISD Mission Statement

Additional Information about Students (four pages)

The CFK Ltd. School Climate Profile (two pages)

TAKS (to STAAR) Information (four pages)

Failure Intervention Plan (two pages)

Scantron Form (Decoding EOC Tests)

Student/Teacher Information
- Student Information Sheet
- REL Video/DVD Request Form
- Sample Curriculum Teaching Daily Plan Page
- Syllabi Vocabulary Samples (two pages)
- Costa's Level of Questions
- Using Abelard's Engagement Model
- Changes in Time and Matter (Albert Einstein)

Article Examples: Psychological Reports; ERIC ED534647; and Texas Study: Preparing for the STAAR test…

KTBB.com News-Talk-Sports

KTBB AM600/KTBB 92.1FM Tyler, Texas

Number of Failing Texas Schools Nearly Doubles; Many in East Texas

Print This

0

AUSTIN (AP) — Texas education authorities say the number of schools falling short of minimum standards and placed on the Public Education Grant list doubled from 2012 because of newer, higher standards. A number of East Texas campuses are named. A total of 892 schools were listed statewide in 2013, up from 456 in 2012. The list allows students to transfer from substandard schools to other campuses.

Here's a rundown of East Texas schools included in the rundown, according to KETK:

Carthage ISD – Baker-Koonce Intermediate
Crockett ISD – Crockett Elementary, Crockett HS, Crockett Junior High
Daingerfield-Lone Star ISD – Daingerfield HS
Edgewood ISD – Gus Garcia Middle, H B Gonzalez Elementary, Las Palmas Elementary, Memorial H S, Winston Elementary
Garrison ISD – Garrison Elementary
Gilmer ISD – Gilmer Elementary
Grapeland ISD – Grapeland HS
Jefferson ISD – Jefferson Junior High
Karnack ISD – Karnack HS
Leverett's Chapel ISD – Leverett's Chapel HS
Linden-Kildare CISD – Linden-Kildare HS
Longview ISD – Forest Park Magnet School, J L Everhart Magnet Elementary, Johnston-McQueen Elementary, Longview HS, South Ward Elementary, Ware Elementary
Marshall ISD – Crockett Elementary, G W Carver Elementary, J H Moore Elementary, Marshall HS, Marshall JH, WM B Travis Elementary
Mt. Pleasant ISD – Annie Sims Elementary, Frances Corprew Elementary, Mt. Pleasant HS, Vivian Fowler Elementary
Nacogdoches ISD – Brooks-Quinn-Jones Elementary, Emeline Carpenter Academy of Technology and Science, Fredonia Elementary, Thomas J Rusk Academy of Technology and Science
Overton ISD – Overton Elementary, Overton HS
Palestine ISD – Palestine Middle
Pine Tree ISD – Pine Tree Intermediate
Pittsburg ISD – Pittsburg Elementary, Pittsburg HS
Sulphur Springs ISD – Sulphur Springs Middle
Tatum ISD – Tatum HS
Trinidad ISD – Trinidad School
Tyler ISD – Douglas Elementary, Griffin Elementary, John Tyler HS, Orr Elementary, Peete Elementary, Robert E Lee HS, Wayne D Boshears Center for Exceptional Programs
Union Grove ISD – Union Grove HS
Waskom ISD – Waskom Elementary
West Rusk County Consolidated ISD – West Rusk Intermediate, West Rusk Middle
White Oak ISD – White Oak HS
Wills Point ISD – Earnest O Woods Intermediate

1

1

(used with permission)

Tyler ISD

The Board of Trustees approved a new Tyler ISD mission statement and objectives at the March board meeting. A special thank you to the District and community volunteers who served on the strategic planning committee and action teams for their work in this process.

Mission of the Tyler Independent School District

The mission of Tyler ISD, a diverse community of learners, is to empower and inspire independent thinkers through innovative learning opportunities, in partnership with our community, to positively impact the world.

The six objectives are:

- All students will graduate prepared for college or career, and life-ready to compete in a global economy.
- All students will learn in schools that meet the needs of our diverse community.
- All students will learn from highly effective educators.
- All students will learn in a safe, secure and positive learning environment.
- All students will learn through comprehensive and innovative education.
- All students will learn using a cutting edge technology device in the educational environment.

Additional Information....A Dad Not in the House

Children without a dad in the home are almost twice as likely to be hyperactive as kids in homes with two parents. Following are some additional statistics:

63% of youth suicides are kids with no dad
90% runaways/homeless from fatherless homes
85% behavior disorders from fatherless homes
71% high school dropouts from fatherless homes
70% juveniles in state operated institutions from homes without dads
85% youths in prison grew up in homes without a dad

Daniel Goleman (1995) wrote about emotional intelligence.
His two abilities to manage relationships are: social skill and empathy.
His three self-management skills are: self-regulation, self-awareness & motivation.
These competencies are critical in building strong, transparent, trusting relationships throughout the school community.

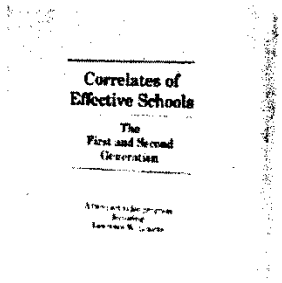
Correlates of Effective Schools: The First and Second Generation

Lawrence Lezotte

This set thoroughly explains each of the seven Correlates of Effective Schools:

- Safe and Orderly Environment
- Climate of High Expectations for Success
- Opportunity to Learn and Student Time on Task
- Home-School Relations
- Instructional Leadership
- Clear and Focused Mission
- Frequent Monitoring of Student Progress

The first generation sets the standard; the second generation provides a view of where we need to go next to achieve "learning for all."



The result of poor climate:
One study found with a 19% turnover of teachers, there was 10% decline in the TAKS math and a 10% decline in the TAKS reading scores
Also, in Texas 19% of new teachers leave after the first year of teaching, and 43% are gone after three years.
The reasons teachers left were:
(1) conditions in the classroom and school
(2) inadequate preparation socially, emotionally, and professionally

Definition http://www.sle.sevier.org/emoclass.htm

Many terms are used to describe emotional, behavioral or mental disorders. Currently, students with such disorders are categorized as having an emotional disturbance, which is defined under the Individuals with Disabilities Education Act as follows:

"...a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance--

(A) An inability to learn that cannot be explained by intellectual, sensory, or health factors.

(B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers.

(C) Inappropriate types of behavior or feelings under normal circumstances.

(D) A general pervasive mood of unhappiness or depression.

(E) A tendency to develop physical symptoms or fears associated with personal or school problems." [Code of Federal Regulations, Title 34, Section 300.7(c)(4)(i)]

As defined by the IDEA, emotional disturbance includes schizophrenia but does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance. [Code of Federal Regulation, Title 34, Section 300.7(c)(4)(ii)]

Characteristics

The causes of emotional disturbance have not been adequately determined. Although various factors such as heredity, brain disorder, diet, stress, and family functioning have been suggested as possible causes, research has not shown any of these factors to be the direct cause of behavior or emotional problems. Some of the characteristics and behaviors seen in children who have emotional disturbances include:

- Hyperactivity (short attention span, impulsiveness);
- Aggression/self-injurious behavior (acting out, fighting);
- Withdrawal (failure to initiate interaction with others; retreat from exchanges of social interaction, excessive fear or anxiety);
- Immaturity (inappropriate crying, temper tantrums, poor coping skills); and
- Learning difficulties (academically performing below grade level).

Individuals with emotional and behavioral disorders have been referred to with a variety of terms: emotionally disturbed, socially maladjusted, psychologically disordered, emotionally handicapped, psychotic, serious emotionally disturbed, and so forth. The term behavior disorder is currently and more frequently being used by many professional and parents for the following reasons:

1. It has greater utility for education than does the term seriously emotionally disturbed.
2. It is not associated exclusively with any particular theory of causation and therefore with any particular set of intervention techniques.
3. It affords a more comprehensive assessment of the population.
4. It is less stigmatizing than the term serious emotional disturbance.
5. It is more representative of the students who are disabled by their behavior and currently served under IDEA.

Characteristics of students with behavior disorders

Intelligence and achievement - Contrary to one popular myth, most children with emotional and behavioral disorders are not bright, intellectually above-average children who are simply bored with their surroundings. Many children score in the slow learner or mildly mentally retarded range on IQ tests than normal children. The following academic outcomes for students with emotional and behavioral disorders have been reported in the research literature (Chesapeake Institute, 1994; Valdes, Williamson, & Wagnor, 1990).

- Two thirds could not pass competency exams for their grade level these children
- These children have the lowest grade point average of any group of students with disabilities.
- Forty-four percent failed one or more courses in their most recent school year.
- They have a higher absenteeism rate than any other disability category (missing an average of 18 days of school per year).
- Forty-eight percent drop out of high school, compared with 30% of all students with disabilities and 24% of all high school students.
- Over 50% are not employed within 2 years of exiting school.

Social skills and interpersonal relationships - The ability to develop and maintain interpersonal relationships during childhood and adolescence is an important predictor of present and future adjustment. Many students with emotional and behavioral disorders often experience great difficulty in making and keeping friends.

Antisocial behavior - The most common pattern of behavior consists of antisocial behavior, sometimes called externalizing behavioral disorders (e.g., out of seat, runs around the room, disturbs peers, hits or fights, ignores the teacher, complains excessively, steals, destroys property, argues, distorts the truth, and so forth).

Withdrawn behavior - Some children are anything but aggressive. Their problem is just the opposite, too little social interaction with others. They are said to have internalizing behavioral disorders. They seldom play with children their own age. They lack many social skills to make and keep friends. They retreat into day dreaming, are fearful of things without reason, frequently complain of being sick or hurt, and go into deep bouts of depression. Since students who manifest internalizing behaviors may be less disturbing to teachers than antisocial students, these withdrawn students may be in danger of not being identified and helped.

Manifestations of behavior disorders

1. Environmental conflicts: aggression and/or self-injurious behavior such as fighting, bullying, violating rules, overactive, impulsive, stealing, truancy, and other socially maladjusted behaviors.
2. Personal disturbances: anxiety disorders such as crying and statements of worry. The student may withdraw socially. In addition, the student may exhibit excessive fear and anxiety.
3. Academic deficits in basic academic skills and educational achievement. Typically, the student performs below expected grade level.
4. Social deficits: students are unpopular and are actively rejected by their peers.
5. Irresponsibility: irresponsibility is common. Students will deny they did anything wrong and when confronted with evidence blame other students.

Behavioral Disorders: Implications for teachers

Increased academic performance comes from: 1) actual time teaching (time spent on instruction) and, 2) student on-task behavior. When teaching is interrupted by inappropriate behavior or students are not on task, the question is how do we manage behavior? The teacher has two overall goals: First, to stop inappropriate behavior, and second, to increase appropriate behavior.

Problems occur where there is a discrepancy between what the teacher expects and what students do (Give examples). Thus, we are dealing with two dimensions: teacher expectations and student behavior.

If we want to increase appropriate behavior, a necessary first step is for the teacher to explicitly, clearly, and fairly define behavioral expectations.

Where do expectations come from? Such expectations evolve from the teacher's values and beliefs about how students should behave in the classroom. It is important to note that the same behavior can be seen differently in different situations and by different people.

Note: the polar position of the two views. There is no right or wrong view. Each may be appropriate under different circumstances. Teachers need to be consistent with their personality and instructional style.

2. Set Rules

✓ Clear rule setting is helpful for all students. Expectations should be explicit, fair, and within the student's range of achievement.

1) Rules should be reasonable, but to whom? Teachers, administrators, parents, students? The most effective rules are developed by all.
2) Rules should be objective. They should be stated in behavioral terms. What is meant by behavioral?
3) Use as few rules as possible. Consider important aspects and ignore the minor aspects.
4) Be consistent with consequences for breaking rules. Use positive reinforcement for compliance with rules and use negative consequences for breaking rules.

In summary, at the beginning of the school year, involve parents and students in setting rules if possible. Put rules in writing and post them in class. Review rules with your students on a periodic basis to discuss any needed changes. The four rules mentioned above have equal weight. Only in combination will they be effective in controlling behavioral problems.

3. Preventive Discipline

Experience tells us that the most effective means of working with students who display emotional or behavioral disorders is preventive in nature. Rather than responding to inappropriate behaviors, use positive interactive approaches that removes the need for inappropriate behaviors.

Ten components to a preventive discipline program (Sabatino, 1987)

1. Inform pupils of what is expected of them
2. Establish a positive learning climate
3. Provide a meaningful learning experience
4. Avoid threats
5. Demonstrate fairness
6. Build and exhibit self-confidence
7. Recognize positive student attributes
8. Time the recognition of student attributes
9. Use positive modeling
10. Structure the curriculum & classroom environment

Notes: Students with emotional disorders do well in educational programs that stress positive behavior management, self-direction, and the development of interpersonal skills. Teachers must "concentrate on getting disruptive behavior under control before any academic work can be presented"

Like anyone else, students with emotional disorders usually respond to positive, corrective feedback when they make an error. Teachers need to communicate care and concern rather than a desire to punish when reacting to inappropriate behaviors. Social skills training are a critical need of this group. Positive role models are requisite. Social skills are best learned naturally, from observing others who display appropriate skills. Other ways of teaching social skills include direct instruction, prompting, and role-playing.

Consider:
(a) Seating arrangement and traffic rules,
(b) Grouping,
(c) Involving the student in class activities,
(d) Using non-verbal cues, (raise the issue of "touching")
(e) Time Management,

Instrument Questions for the CFK Scale

Respect

1. In this school even low achieving students are respected.
2. Teachers treat students as persons.
3. Parents are considered by this school as important collaborators.
4. Teachers from one subject area or grade level respect those from other subject areas.
5. Teachers in this school are proud to be teachers.

Trust

6. Students feel that teachers are "on their side".
7. While we don't always agree, we can share our concerns with each other openly.
8. Our principal is a good spokesman before the superintendent and the board for our interests and needs.
9. Students can count on teachers to listen to their side of the story and be fair.
10. Teachers trust students to use good judgment.

High Morale

11. This school makes students enthusiastic about learning.
12. Teachers feel pride in this school and in its students.
13. Attendance is good; students stay away only for urgent and good reasons.
14. Parents, teachers, and students would rise to the defense of this school's program if it were challenged.
15. I like working in this school.

Opportunity for Input

16. I feel that my ideas are listened to and used in this school.
17. When important decisions are made about the programs in this school, I, personally, have heard about the plan beforehand and have been involved in some of the discussions.
18. Important decisions are made in this school by a governing council with representation from students, faculty, and administration.
19. While I obviously can't have a vote on every decision that is made in this school that affects me, I do feel that I can have some important input into that decision.
20. When all is said and done, I feel that I count in this school.

Continuous Academic and Social Growth

21. The teachers are "alive;" they are interested in life around them; they are doing interesting things outside of school.
22. Teachers in this school are "out in front," seeking better ways of teaching and learning.
23. Students feel that the school program is meaningful and relevant to their present and future needs.
24. The principal is growing and learning, too. He or she is seeking new ideas.
25. The school supports parent growth. Regular opportunities are provided for parents to be involved in learning activities and in examining new ideas.

Cohesiveness

26. Students would rather attend this school than transfer to another.
27. There is a "we" spirit in this school.
28. Administration and teachers collaborate toward making the school run effectively; there is little administrator-teacher tension.
29. Differences between individuals and groups (both among faculty and students) are considered to contribute to the richness of the school; not as divisive influences.
30. New students and faculty members are made to feel welcome and part of the group.

School Renewal

31. When a problem comes up, this school has procedures for working on it; problems are seen as normal challenges; not as "rocking the boat."
32. Teachers are encouraged to innovate in their classroom rather than to conform.
33. When a student comes along who has special problems, this school works out a plan that helps that student.
34. Students are encouraged to be creative rather than to conform.
35. Careful effort is made, when new programs are introduced, to adapt them to the particular needs of this community and this school.

Caring

36. There is someone in this school that I can always count on.
37. The principal really cares about students.
38. I think people in this school care about me as a person; are concerned about more than just how well I perform my role at school (as student, teacher, parent, etc.).
39. School is a nice place to be because I feel wanted and needed there.
40. Most people at this school are kind.

Do not mark outside this line

The CFK Ltd. School Climate Profile

Please darken the bubbles beside each statement that best indicates your opinion concerning first "What Is," and then "What Should Be."

- ♦ Use a no. 2 pencil only.
- ♦ Fill in answer bubbles completely.
- ♦ Erase changes completely.

	Almost always	Frequently	Occassionally	Almost never	Almost always	Frequently	Occassionally	Almost never	What is	What should be
Respect										
1. In this school even low achieving students are respected.										
2. Teachers treat students as persons.										
3. Parents are considered by this school as important collaborators.										
4. Teachers from one subject area or grade level respect those from other subject areas.										
5. Teachers in this school are proud to be teachers.										
Trust										
6. Students feel that teachers are "on their side."										
7. While we don't always agree, we can share our concerns with each other openly.										
8. The principal is a good spokesman before the superintendent and the board for our interests and needs.										
9. Students can count on teachers to listen to their side of the story and to be fair.										
10. Teachers trust students to use good judgement.										
High Morale										
11. This school makes students enthusiastic about learning.										
12. Teachers feel pride in this school and its students.										
13. Attendance is good; students stay away only for urgent and good reasons.										
14. Parents, teachers, and students would rise to the defense of this school's program if it were challenged.										
15. I like working in this school.										
Opportunity for Input										
16. I feel that my ideas are listened to and used in this school.										
17. When important decisions are made about the programs in this school, I, personally, have heard about the plan beforehand and have been involved in some of the discussions.										
18. Important decisions are made in this school by a governing council with representation from students, faculty, and administration.										
19. While I obviously can't have a vote on every decision that is made in this school that affects me, I do feel that I can have some important input into that decision.										
20. When all is said and done, I feel that I count in this school.										
Continuous Academic and Social Growth										
21. The teachers are "alive"; they are interested in life around them; they are doing interesting things outside of school.										
22. Teachers in this school are "out in front," seeking better ways of teaching and learning.										
23. Students feel that the school program is meaningful and relevant to their present and future needs.										
24. The teachers are growing and learning, too. They are seeking new ideas.										
25. The school supports parent growth. Regular opportunities are provided for parents to be involved in learning activities and in examining new ideas.										
Cohesiveness										
26. Students would rather attend this school than transfer to another.										
27. There is a "we" spirit in this school.										
28. Administration and teachers collaborate toward making the school run effectively; there is little administrator-teacher tension.										
29. Differences between individuals and groups (both among faculty and students) are considered to contribute to the richness of the school, not as divisive influences.										
30. New students and faculty members are made to feel welcome and part of the group.										
School Renewal										
31. When a problem comes up, this school has procedures for working on it; problems are seen as normal challenges, not as "rocking the boat."										
32. Teachers are encouraged to innovate in their classroom rather than to conform.										
33. When a student comes along who has special problems, this school works out a plan that helps that student.										
34. Students are encouraged to be creative rather than to conform.										
35. Careful effort is made, when new programs are introduced, to adapt them to the particular needs of this community and this school.										
Caring										
36. There is someone in this school that I can always count on.										
37. The pricipal really cares about students.										
38. I think people in this school care about me as a person, are concerned about more than just how well I perform my role at the school (as student, teacher, parent, etc.).										
39. School is a nice place to be because I feel wanted and needed there.										
40. Most people at this school are kind.										

REL Science TAKS Tutorials

January 2010

Sunday	Monday	Tuesday	Wednesd	Thursday	Friday	Saturday
					1	2
3						9
10						16
17	18	19	20	21	22	23
24	25 Obj. 3 (4C/4D)	26 Obj. 3 (7A)	27 Obj. 3 (9D)	28	29 Make Up	30

Tutorials will be offered in both the morning and afternoon at the times listed below

February 2010

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Obj. 3 (12B)	2	3	4 Obj. 3 (12E)	5 Obj. 3 (13A)	6
7	8 Obj. 2 (4B)	9	10	11 Obj. 2 (6A/6B)	12	13
14	15 Obj. 2 (6C/6D)	16	17	18 Obj. 2 (8C)	19 Obj. 2 (10A/10 B)	20
21	22 Obj. 1 (1A/2B)	23 Obj. 1 (2A/2C/ 2D)	24	25	26 Obj. 1 Make Up	27

March 2010

Sunday	Monday	Tuesday	Wednesd	Thursda	Friday	Saturday
	1 Obj. 1 (3A/3B)	2	3	4	5 Obj. 1 Make Up	6
7	8	9	10	11	12	13
14	15 Obj. 4 (7A& D)	16 Obj. 4 (8A & E)	17	18	19 Obj. 4 (8C)	20
21	22	23	24	25	26	27
28	29 Obj. 4 (9A & B)	30 Obj. 4 (9D)	31	Obj. 4 Make Up		

April 2010

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 Obj. 4 Make Up	2	3
4	5 Obj. 5 (4A)	6 Obj. 5 (4B/4D)	7	8	9 Obj. 5 Make Up	10
11	12 Obj. 5 (5A/5B)	13 Obj. 5 (6B)	14 Obj. 5 (6A/6D/6f)	15	16 Obj. 5 Make Up	17
18	19 Open Tutorials	20 Open Tutorials	21	22	23	24
25	26 Open Tutorials	27 Open Tutorials	28	29 Sci. TAKS Test	30	

Morning Tutorials: 7:50 am – 8:20 am in D-118

Afternoon Tutorials: 4:10 pm – 4:40 pm in D-111

_____Name
_____Grade Last Year (sophomore or junior)
_____Grade This Year (sophomore or junior)
_____Chemistry Class Period

Science TAKS Scores (percent and number (#) of questions answered correctly) April 2009

	(%)	(#)	
Objective 1	_____	(____)	General science questions
Objective 2	_____	(____)	Biology (technical)
Objective 3	_____	(____)	Biology (reading)
Objective 4	_____	(____)	Chemistry
Objective 5	_____	(____)	IPC Physics (15 basic formulas)

Your % and Total Questions Answered Correctly _____(_____)

Sophomores # TAKS Questions	Juniors # TAKS Questions
Obj 1 17	Obj 1 17
Obj 2 11	Obj 2 8
Obj 3 11	Obj 3 8
Obj 4 8	Obj 4 11
Obj 5 8	Obj 5 11
Total: 55	Total: 55

35 questions answered correctly in 2009 = 2100 scaled score to pass science TAKS. This year will need to answer 36 questions (or maybe 37) to pass. If you get greater than 10 questions right on Obj 1, 95% pass. If you get less than 10 on Obj 1, then Obj 5 is easiest to raise score. Most do well on Obj 3. Obj 4 is lowest score for State of Texas and Lee.

11th Grade Science TAKS Simulation Results and Analysis

Name: _____ Date: _____ Teacher: _____

The number in each box represents a test question. Color in the box of each question that you got correct, then count the total number and write that in the "Total Correct" box.

Objective # 1: Nature of Science

5	8	10	12	16	18	21	24	31	38	39	42	44	49	51	53	55	Total Correct

Objective # 2: Organization of Living Systems

3	7	13	17	29	36	41	50	Total Correct

Objective # 3: Interdependence of Organisms

6	15	25	32	37	40	43	46	Total Correct

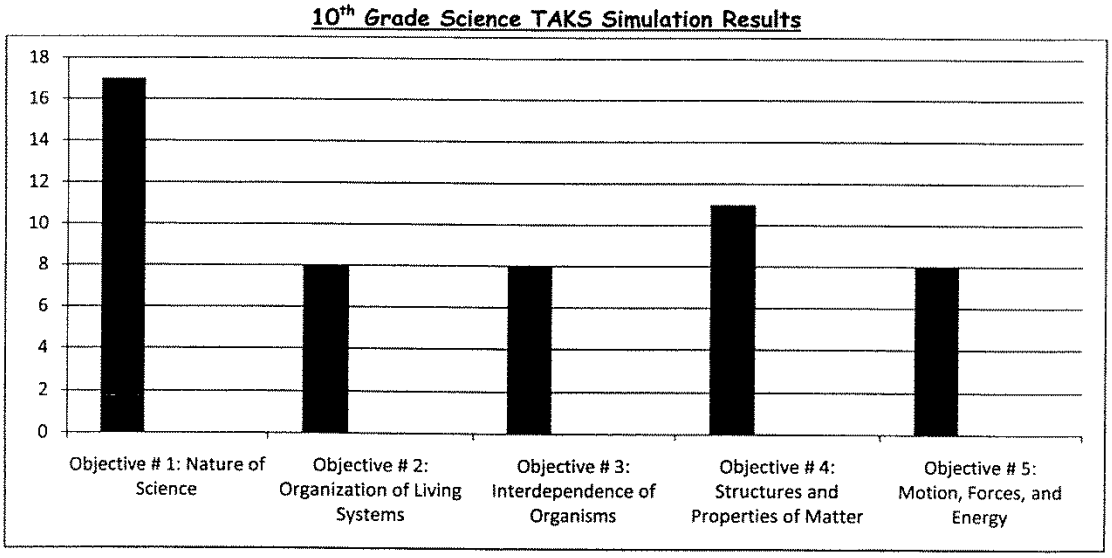
Objective # 4: Structures and Properties of Matter

4	11	14	20	22	27	30	34	35	47	54	Total Correct

Objective # 5: Motion, Forces, and Energy

1	2	9	19	23	26	28	33	45	48	52	Total Correct

Complete the bar graph below by graphing the total number correct you had for each objective.



Shade in the box with the total number correct to determine your success in each objective:

Objective #	Objective Topic	Red (Did Not Meet Expectations)	Green (Did Meet Expectations)
1	Nature of Science	0 - 9 correct	10 - 17 correct
2	Organization of Living Systems	0 - 4 correct	5 - 8 correct
3	Interdependence of Organisms	0 - 4 correct	5 - 8 correct
4	Structures and Properties of Matter	0 - 5 correct	6 - 11 correct
5	Motion, Forces, and Energy	0 - 5 correct	6 - 11 correct

Senior Science TAKS Failures...William 9/20/10

Johnson, William

Sent: Monday, September 20, 2010 12:15 PM

To: Hood, Lana

Cc: Johnson, William

Lana,

This weekend, as I had an hour or so, I looked at senior science TAKS failures. The sample sizes are different, and I didn't run a homogeneity of variance to test to see if the following was statistically valid. However, following some observations.

Those that failed...how many questions they were below those who passed.

Objectives & # Questions Below Passing Mean Scores

1	3.85
2	1.1
3	1.4
4	2.15
5	2.45

TOTAL 10.95.

This is what our previous other analyses have shown. Again, I've not run HOV test to be sure this is true statistically; however, just mean observations.

William

FAILURE INTERVENTION PLAN

Student_____ Phone #_____ Date_____

The purpose of the Failure Intervention Plan is so that a student may have the opportunity to succeed through implementation of an intervention system. Teachers will implement the intervention plan when the following failures occur:

- Each progress report period.
- Each six weeks period
- Failure on any portion of the duplicated released TAKS test administered by the teacher
- Failure on any portion of each Performance Plus
- Failure of seniors on any portion of the TAKS test

The plan includes documentation of the following:

1) Weekly phone calls
2) Attendance for arranged weekly tutorial sessions
3) Instructional adjustments to accommodate the needs of the student
4) Daily attendance
5) Discipline management

Check the appropriate blank for initiation of student intervention:

Progress Reports	**Six Weeks**	**Performance Plus**
_____ 1st Six weeks Progress	_____1st Six Weeks	_____ #1 Perfor. Plus
_____ 2nd Six weeks Progress	_____2nd Six Weeks	_____ #2 Perfor. Plus
_____ 3rd Six weeks Progress	_____3rd Six Weeks	_____ #3 Perfor. Plus
_____ 4th Six Weeks Progress	_____4th Six Weeks	_____ #4 Perfor. Plus
_____ 5th Six Weeks Progress	_____5th Six Weeks	_____ #5 Perfor. Plus
_____ 6th Six Weeks Progress	_____6th Six Weeks	_____ #6 Perfor. Plus

_____**Released TAKS Test** _____**TAKS test (seniors)**

Parent Phone Calls

Date	**Results**

Dates of Tutorial Attendance

Date	Assignment	Student Signature

Attendance

____Good (less than two days)
____Fair (less than 3 days)
____Poor (4 or more days)

_____Make-up work completed
_____Parent phone call (3 absences)
_____Referral to the principal (3 unexcused days or more)

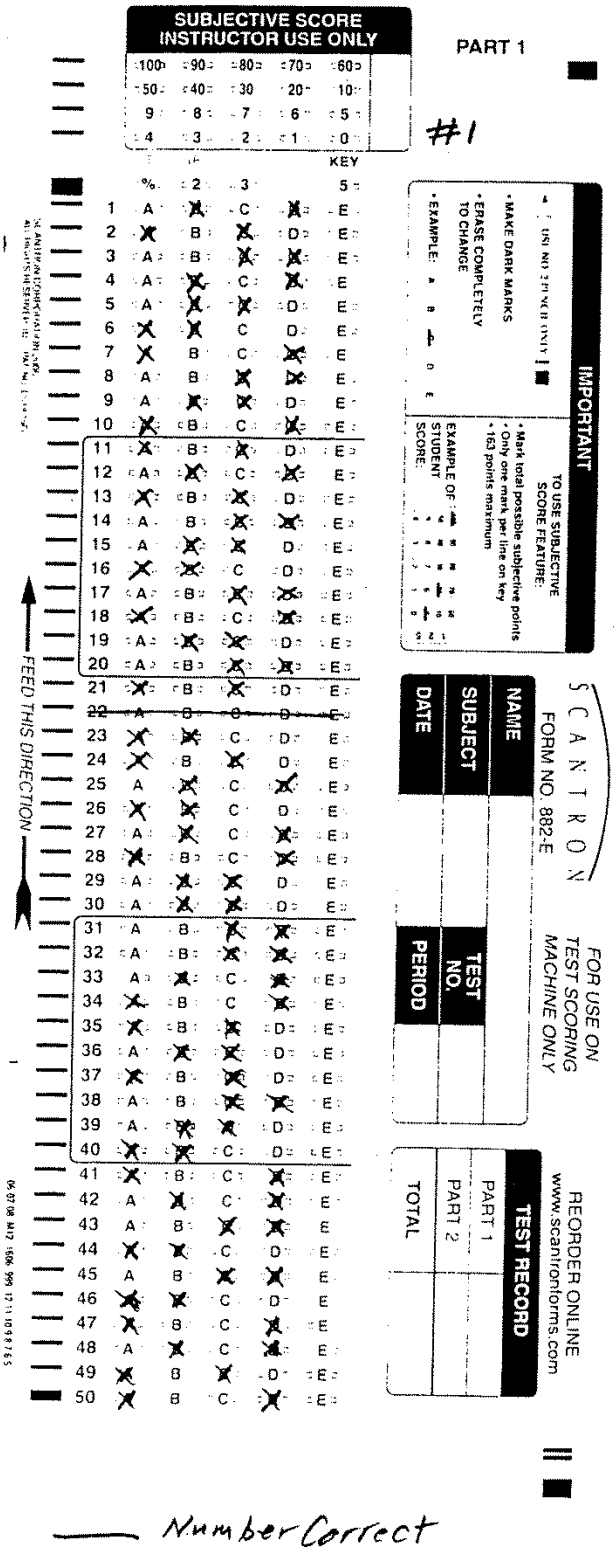
Teacher Discipline

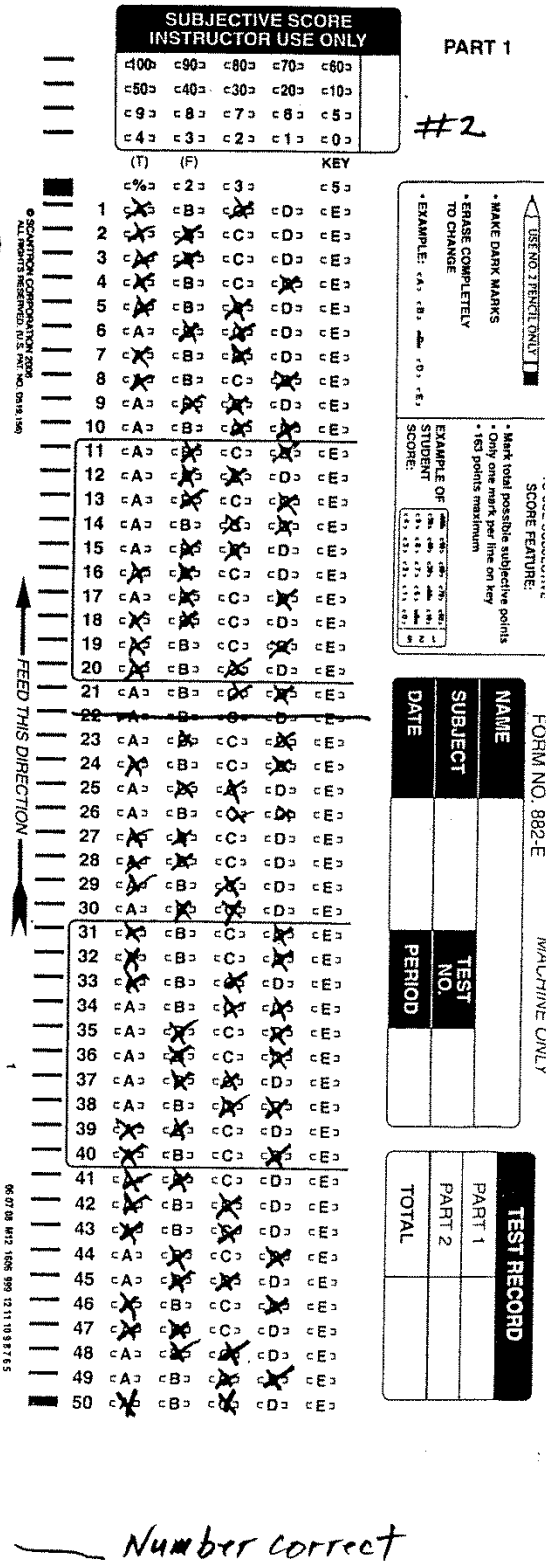
_____**Parent phone call (Dates_____)**
_____**Teacher d-hall (Dates_____)**
_____**After-school d-hall (Dates_____)**
_____**Saturday School (Dates_____)**
_____**Infraction to principal (Dates_____)**

List the instructional adjustments that were implemented.

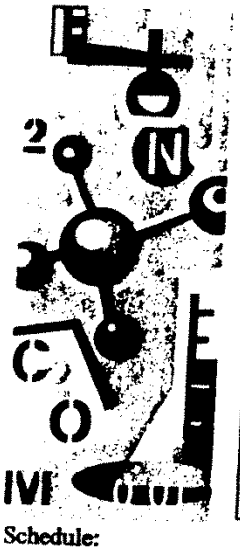
1.
2.
3.
4.
5.
6.

Evaluate progress of student below through available data, i.e. tests, daily work, writings, report card, Performance Plus, and released TAKS test.


SUBJECTIVE SCORE
INSTRUCTOR USE ONLY
PART 1
#1
KEY
IMPORTANT
NAME
SUBJECT
DATE
TEST NO.
PERIOD
TEST RECORD
PART 1
PART 2
TOTAL
SCANTRON
FORM NO. 882-E
FOR USE ON TEST SCORING MACHINE ONLY
REORDER ONLINE
www.scantronforms.com
FEED THIS DIRECTION
Number Correct


SUBJECTIVE SCORE
INSTRUCTOR USE ONLY
PART 1
#2
KEY
NAME
SUBJECT
DATE
TEST NO.
PERIOD
TEST RECORD
PART 1
PART 2
TOTAL
FORM NO. 882-E
FOR USE ON TEST SCORING MACHINE ONLY
FEED THIS DIRECTION
Number correct

Student Information Sheet



Block or Period _____

Name _____

Birth Date: _____

Address : _____

Phone # _____

Email: _____

Schedule:

First Semester

Block or Period	Course & Room #

Second Semester

Block or Period	Course & Room #

Father's Name _____ Employment: _____

Home Phone # _____ Home Address: _____

Work phone # _____

Mother's Name _____ Employment: _____

Home Phone # _____ Home Address: _____

Work phone # _____

Continue of Back Side

LIST THE SCIENCE CLASSES YOU HAVE TAKEN IN HIGH SCHOOL...

1.

2.

3.

4.

AS APPLICABLE, DID YOU PASS TAKS SCIENCE EXAM....

Soph Year_____ (Yes or No)

Junior Year_____ (Yes or No)

Hobbies_____

Favorite Music/Groups_____

Favorite Movies_____

Any Comments about what you want to get out of chemistry class:

_____

_____

REL Video/DVD Request Form

Today's Date:_____

Teacher:_____ Subject Area:_____

Grade Level:_____ Room # (s):_____

Video/DVD Title:_____

Video/DVD Length:_____ Source (if other than REL Library):_____

Rating of media: G PG PG13 R

Date Video/DVD will be viewed:_____

Time Video/DVD will be viewed:_____

This video will be used:

_____ To introduce a unit of study _____ For individual projects

_____ To reinforce a unit of study _____ For seminars

_____ To provide background for discussion _____ To develop basic concepts in

_____ To provide visual/concrete experience of abstract concepts

_____ To review a unit of study/concept _____ Alternative assignment (those who were not given permission.)

_____ To accompany a writing and/or reading selection

Please list the specific connection(s) to Tyler ISD curriculum and whether or not entire video or clip will be shown. If the entire video is shown, please state rationale for the complete showing.

_____Attach copy of extension activity regarding video shown

APPROVAL BY (signature indicates approval prior to usage)

Principal:_____ _____ Date:_____

Please take completed form to your principal 3 days prior to the time the media is to be used.

1/20 MLK DAY	1/21 review balancing/explain stoichiometry concept	1/22 start stoichiometry mole:mole ratio	1/23 **Quiz 8D Balancing** (1st grade of six weeks) stoich with mole:mass ratio	1/24
1/27 stoich with mass:mass ratios	1/28 stoich with mass:mass ratios	1/29 stoich with mass:mass ratios + limiting reactant	1/30 stoich with mass:mass ratios + limiting reactant + percent yield	1/31 **Give CCA#4 test over 8ABCD** (2nd chance/8CD, 3rd grade avg whole test)
2/3 Finish up stoichiometry and maybe start gas laws (if ready)	2/4 review stoich	2/5 **Quiz 8E Stoichiometry** (maybe start gas law)	2/6 Cover all of KMT	2/7 boyles law lab
2/10 review lab and teach how to work math problems	2/11 STEM training Work gas law problems?	2/12 charles law/avogadros law	2/13 combine law/dalton's law	2/14 Ideal gas law
2/17 **Staff Development day**	2/18 (Textbook adoption day – smiley out)	2/19 **QUIZ gas laws 9A and 9C**	2/20 9B – gas stoich and review regular stoichometry	2/21 gas stoich and review regular stoichometry
2/24 REVIEW	2/25 **CCA #5 Unit 9/10 (second chance for 8E & 9A/C) 9B? maybe not record**	2/26	2/27	2/28 XX Last day of 4th six weeks XX
3/3 1st day of 5th six weeks	3/4	3/5	3/6	3/7
3/10	3/11	3/12	3/13	3/14
3/17	3/18	3/19	3/20	3/21

SYLLABUS: STOICHIOMETRY

Textbook pages: _____

1. define vocabulary
2. solve stoichiometric problems
3. write balanced chemical equations given the name of the reactants
4. determine the limiting reagent
5. determine the percent yield given the actual yield
6. determine the amount of excess reagent that remains unreacted

Vocabulary
coefficient
stoichiometry
actual yield
theoretical yield
percent yield
excess reagent
limiting reagent
coefficient
subscript
reactants
products
Law of Conservation of Mass

SYLLABUS: SOLIDS AND LIQUIDS

1. define vocabulary
2. distinguish between solids, liquids and gases
3. using the strength of the force between lattice point compare properties of liquids and solids { vapor pressure, surface tension, viscosity, boiling point, melting point, critical temperature, capillary action}
4. describe the changes of state including the energy transfer involved in each change of state
5. list and describe the two driving forces
6. determine the driving force that favors each change of state
7. describe equilibrium and the relationship between equilibrium and change of state
8. interpret phase diagrams
9. distinguish between evaporation and boiling
10. solve problems involving change in temperature and change in state
11. Recognize and describe the properties of the four types of solids based on forces between lattice points

Vocabulary

solids
liquids
surface tension
viscosity
capillary action
cohesive forces
adhesive forces
sublimation
evaporation
condensation
vapor pressure
equilibrium
freezing/melting point
boiling point
heat of fusion
heat of vaporization
endothermic
exothermic
enthalpy
entropy
triple point
critical temperature
critical pressure
calorie
specific heat
amorphous solids
crystalline solid
critical point
normal boiling point
normal freezing/melting point

Costa's Level of Questions: *Science*

Level 1	Level 2	Level 3
What information is given?	What additional information is needed to solve the problem?	Design a lab to show...
What are you being asked to find?	Can you see other relationships that will help you find this information?	Predict what will happen to _____ as _____ is changed.
What formula would you use in this problem?	How can you put your data in graphic form?	Using a principle of science of math, how can we find...?
What does_____ mean?	What occurs when...?	Describe the events that might occur if...
List the...	How would you change your procedures to get better results?	Design a scenario for...?
Name the...	What method would you use to...?	Pretend you are...
Where did...?	Compare and contrast _____ to _____.	What would the world be like if...
What is...?	What was important about...?	How can you tell if your answer is reasonable?
Who was/were...?	Which errors most affected your results?	What would happen to _____ if _____ variable were increased/decreased?
When did...?	What are some sources of variability?	How would repeated trials affect your data?
What are you being asked to find?	How do you conclusions support your hypothesis?	What significance is this experiment/formula to the subject you are learning?
Explain the concept of...	What prior research and/or formulas support your conclusion?	What type of evidence is most compelling to you?
Give me an example of...	How else could you account for...?	Do you fell_____ experiment is ethical?
Describe in you own words what _____ means.	Explain the concept of...	Are your results biased?
What science or math concepts does this problem connect to?	Give me an example of...	
Draw a diagram of...		
Illustrate how _____ works.		
Explain how you calculate...		
What is the formula for...?		

Using Abelard's Engagement Model

Human Hair --1 million times wider than atom

Atom -- 10,000 times larger than its nucleus

Nuclei -- 10 times larger than the subatomic particles like protons

Protons -- 1,000 times larger than quarks & leptons (think smallest objects in the universe and nature's fundamental building blocks)

(1,000,000) (10,000) (10) (1,000) = 100,000,000,000,000 or 10^{14}

If all the computers in the world were connected, that would be equivalent to one human mind.

If all the empty space in the body was taken out, each person would be the size of a pea.

One milliliter of free electrons at the base of the launch vehicle would stop the former space shuttle from "taking off."

One thimble of free electrons would be powerful enough to keep the moon in orbit around the earth.

One human cell is more complex than New York City.

You have 99.5% of your parents' DNA and share the following DNA: 98% with chimpanzees, 90% with dinosaurs, and 40-50% with cabbage.

CHANGES IN MATTER AND TIME AS VELOCITY INCREASES

Mass Increases:

$$m = \frac{m_0}{\sqrt{1 - \frac{v^2}{c^2}}}$$

Where: m = mass when moving

m_0 = mass on earth at rest

v = speed of body

c = speed of light

A 2000 pound-mass car at rest becomes:

At:	Increase to:	Increase:
½ C	m = 2309 lb	15%
3/4C	m = 3255 lb	63%
.9 C	m = 4588 lb	1 1/3 times increase in mass
.99C	m = 14,177 lb	6 times increase in mass
.9999C	m = 141,421 lb	70 times increase in mass

Time Lengthens:

$$t = \frac{t_0}{\sqrt{1 - \frac{v^2}{c^2}}}$$

Where: t = time when moving (or time clock ticking in moving)

t_0 = time on earth (or time clock ticking when stationary)

1 year on earth becomes:

At:	
½ C	t = 1.15 years
.999 C	t = 22.31 years
.9999 C	t = 70.71 years
.999999 C	t = 707.11 years or (1 second becomes 11.78 min.)

Length Shortens:

$$L = L_0\sqrt{1 - \frac{v^2}{c^2}}$$

Where: L_0 = length when stationary on earth

L = length when moving

Object a football field (100 yds.) length becomes:

At:	
½ C	86.6 yards
.999 C	.0447101 yards or 1.6 inches
.9999 C	.014142 yards or .51 inches
.99999 C	.0014142 yards or .05 inches

These equations illustrate higher-order laws not commonly thought of as one increases velocity.

Psychological Reports, 1999, 84, 395-397. © Psychological Reports 1999

ASSESSING PERCEPTIONS OF SCHOOL CLIMATE AMONG JORDANIAN STUDENTS IN ENGLISH-SPEAKING SCHOOLS[1]

WILLIAM L. JOHNSON AND ANNABEL M. JOHNSON

Digital Documentation Systems, Hawkins, Texas — *Big Sandy, Texas*

Summary.—The study assessed the perceptions of school climate among 183 students at the Amman Baccalaureate School and the New English School in Amman, Jordan. Findings indicate that these students' largest perceived discrepancies between present and desired school climates are related to opportunities for providing input into school processes and decisions and to issues of trust and caring.

School climate is a broad term that refers to students' perceptions of the environment of a school, distinguishing one school from another and influencing their behavior (3). Research on classroom climate provides insights into the conditions necessary to maximize learning. In a meta-analysis of data from 12 studies in four countries, better achievement in a variety of outcome measures occurred consistently in classes that students perceived as high on cohesiveness, satisfaction, and goal direction (2). A more generalizable finding, however, was that the classroom climate most conducive to learning was one in which there was congruence between students' perceptions of actual and desired environmental (4). The purpose of the study was to assess the perceptions of school climate among Jordanian students in two English-speaking schools in Amman, Jordan.

The authors were permitted to administer the Charles F. Kettering Ltd. School Climate Profile (1) to 100 ninth (aged 14–15 years) and eleventh (aged 16–17 years) grade students from the Amman Baccalaureate School (57 boys) and 83 ninth grade students from the New English School (50 boys). Data from students from both schools were combined ($N=183$).

We administered Part A–General Climate Factors of the Kettering profile which comprises 40 items.[2] This section of the profile has eight subscales. Names and example of items are Respect (Teachers treat students as persons), Trust (Teachers trust students to use good judgment), High Morale (I like working in this school), Opportunity for Input (I feel my ideas are listened to and used in this school), Continuous Academic and Social

[1]Address correspondence to William L. Johnson, Digital Documentation Systems, One Digital Plaza, Hawkins, TX 75765-1400.

[2]Permission to reproduce the School Climate Profile items as published in the *Handbook for Conducting School Climate Improvement Projects* was obtained in writing from Phi Delta Kappa, Eighth and Union, P.O. Box 789, Bloomington, IN 47402-0789.

Growth (The principal is growing and learning too. He or she is seeking new ideas), Cohesiveness (Students would rather attend this school than another), School Renewal (Students are encouraged to be creative rather than to conform), and Caring (Most people at this school are kind). The rating scale has two discrepancy-format columns, each with four possible responses: 1 = almost never, 2 = occasionally, 3 = frequently, and 4 = almost always. The "What Is" column is the perceived actual status of the skill or attitude, while the "What Should Be" column is the perceived desired status of the skill or attitude.

The School Climate Profile was designed to be used in school settings. As part of the test development, the content validity was assessed originally by having more than 200 educators throughout the United States respond to the items. The test's developers reported at least eight factors contributed to a school's climate and its quality. Although the test's developers (1) did not report measures of reliabilities, the authors calculated for the present sample estimates of Cronbach alpha for the subscales,"What Is" ("What Should Be") Respect .49 (.54), Trust .51 (.48), High Morale .49 (.63), Input .61 (.63), Academic and Social Growth .47 (.55), Cohesiveness .56 (.55), School Renewal .64 (.72), and Caring .70 (.76). The composite for all "What Is" questions was .88 and for "What Should Be" .91. The authors also calculated the Pearson intercorrelations among the eight factors. The average correlation for the "What Is" factors was .38, while the average for the "What Should Be" was .48. The latter score seems to reflect the "ideal" nature of the subjects' ratings. Because the profile uses two discrepancy-format columns, we performed separate analyses for the "What Is" (left) side of the scale, the "What Should Be" (right) side of the scale, and the Discrepancy between the means of the right and left scores for each subscale. Table 1 shows that scores for Respect, School Renewal, and Continuous Academic and Social Growth were most highly rated for the "What Is" subscales, while Caring, Respect, and Trust were most highly rated for the "What Should Be" subscales. The Input, Trust, and Caring subscales had the highest rank-ordered Discrepancy scores. These students perceived these top three areas as needing the greatest improvement to achieve ideal status.

Caring, Respect, and Trust were the top three "What Should Be" subscales, which are affective dimensions of school climate. Two of the three top-ranked Discrepancy scores were also affective dimensions (Trust and Caring). These preliminary findings suggest that the affective dimensions of school climate might be a desirable focus for school-intervention programs. Also, the Discrepancy score for the Input dimension (1.10) was highest for all eight subscales. The students stated they were occasionally asked for opinions about school matters, but they felt they should be asked more frequently.

TABLE 1
SCALE MEANS, DISCREPANCY SCORES, AND RANKINGS ON THE GENERAL CLIMATE FACTORS SECTION OF THE SCHOOL CLIMATE PROFILE ($N = 183$)

Scale*	1. "What Is"			2. "What Should Be"			Discrepancy‡	$r_{1,2}$†	D Scores*
	M	SD	Rank**	M	SD	Rank**			
Input	2.23	0.69	8**	3.33	0.63	5	1.10	0.18	17.5
Trust	2.32	0.62	7	3.40	0.56	3	1.08	0.28	20.7
Caring	2.48	0.75	5	3.51	0.67	1	1.03	0.20	16.0
Growth	2.51	0.63	3	3.38	0.64	4	0.87	0.22	14.9
Morale	2.50	0.64	4	3.30	0.66	7	0.80	0.34	14.5
Cohesiveness	2.47	0.67	6	3.26	0.62	8	0.79	0.26	13.5
Renewal	2.61	0.72	2	3.31	0.72	6	0.70	0.39	11.8
Respect	2.83	0.60	1	3.48	0.54	2	0.65	0.48	14.9
Composite	2.49			3.37			0.88	0.27	22.7

Note.—Subjects rated choices anchored by Almost Never (1) and Almost Always (4). *Ordered by discrepancy score. **Numbers represent rankings by subjects; one is the highest ranking and eight is the lowest ranking. †"What is" and "What Should Be." ‡Between mean scores. *$p < .001$.

For the "What Is" subscale, boys had a mean score of 2.41, while girls scored 2.59. For scores on "What Should Be" boys' mean score was 3.27, while girls' was 3.50. Differences were not significant.

We also examined the influence of grade on the composite scores. For the ninth and 11th grades these were 3.43 and 2.43, respectively. "What Should Be" scores were 4.57 and 3.53 for ninth and 11th grade students, respectively. The ninth grade mean scores were much larger, leading to statistically significantly different discrepancy scores.

REFERENCES

1. FOX, R. S., BOIES, H. E., BRAINARD, E., FLETCHER, E., HUGE, J. S., MARTIN, C. L., MAYNARD, W., MONASMITH, J. S., OLIVERO, J., SCHMUCH, R., SHAHEEN, T. A., & STEGEMEN, W. H. (1973) *School climate improvement: a challenge to the school administrator*. Bloomington, IN: Phi Delta Kappa.
2. HAERTEL, G. D., WALBERG, H. J., & HAERTEL, E. H. (1981) Sociopsychological environments and learning: a quantitative synthesis. *British Educational Research Journal*, 7, 27-36.
3. HOY, W. K., & MISKEL, C. W. (1991) *Educational administration: theory into practice*. New York: Random House.
4. RENTOUL, A. J., & FRASER, B. J. (1980) Predicting learning from classroom individualization and actual preferred congruence. *Studies in Educational Evaluation*, 6, 265-277.

Accepted February 11, 1999.

ED534647 - Predicting Student Success on the Texas Chemistry STAAR Test: A Logistic Regression Analysis

Record Details

Full-Text Availability Options:

ERIC Full Text (227K)

Related Items: Show Related Items

Click on any of the links below to perform a new search

ERIC #: ED534647

Title: Predicting Student Success on the Texas Chemistry STAAR Test: A Logistic Regression Analysis

Authors: Johnson, William L.; Johnson, Annabel M.; Johnson, Jared

Descriptors: High School Students; Grade 10; Grade 11; Chemistry; Science Tests; Achievement Tests; Science Achievement; Scores; Regression (Statistics); Prediction; Models; Accuracy; Test Preparation; Testing

Source: Online Submission

Peer Reviewed:

Publisher: N/A

Publication Date: 2012-08-25

Pages: 26

Pub Types: Reports - Research

Abstract: Background: The context is the new Texas STAAR end-of-course testing program. Purpose: The authors developed a logistic regression model to predict who would pass-or-fail the new Texas chemistry STAAR end-of-course exam. Setting: Robert E. Lee High School (5A) with an enrollment of 2700 students, Tyler, Texas. Date of the study was the 2011-2012 academic year. Study Sample: A sample of n = 100 students from the author's chemistry classes (32 high school sophomores and 68 high school juniors). Intervention: Developed a binary logistic regression prediction model (no control group applicable). Research Design: Statistical Modeling. Control or Comparison Condition: Control or comparison group--not applicable for the study. Data Collection and Analysis: The students' (n = 100) STAAR test scores from the new Texas end-of-course chemistry pilot test were analyzed in the 2011-2012 school year. Variables included in the logistic regression model were as follows: Students' previous years science TAKS test scores (raw data); science TAKS scores and STAAR end-of-course scores coded pass (1) or fail (0) as categorical variables; and students' grade level coded sophomore (0) or junior (1) as categorical variables. Findings: A binary logistic regression analysis was performed using the new Texas end-of-course pilot chemistry STAAR test scores as the dependent variable (DV) and the previous year's science TAKS scores and grade level as predictor variables. A total of n = 100 cases were analyzed, and the full model was significantly reliable (chi-square = 102.568, df = 2, p less than 0.000). This model accounted for between 64.1% and 85.9% of the variance in STAAR status, with 92.9% of the students passing the STAAR test successfully predicted and 93.2% of students failing the STAAR test successfully predicted. Overall, 93.0% of the predictions were correct. The Wald statistic showed that the TAKS raw score reliably predicted passing or failing the STAAR end-of-course chemistry test. Conclusion: The binary logistic regression model was significantly reliable (chi-square = 102.568, df = 2, p less than 0.000). Overall, 93% of the predictions were correct. The model had a very high predictive outcome. Logistic Regression Variables are appended to this document.

Abstractor: As Provided

Reference Count: 8

Note: N/A

Identifiers: Texas

Record Type: Non-Journal

Level: N/A

Institutions: N/A

Sponsors: N/A

ISBN: N/A

Logistic Regression

[DataSet1] C:\Users\Johnson\Documents\Logregression1.sav

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	100	99.0
	Missing Cases	1	1.0
	Total	101	100.0
Unselected Cases		0	.0
Total		101	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
.00	0
1.00	1

Categorical Variables Codings

		Frequency	Parameter coding (1)
sophjr	.00	32	1.000
	1.00	68	.000

Block 0: Beginning Block

Iteration History[a,b,c]

Iteration		-2 Log likelihood	Coefficients Constant
Step 0	1	137.186	.240
	2	137.186	.241
	3	137.186	.241

a. Constant is included in the model.

b. Initial -2 Log Likelihood: 137.186

c. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Classification Table[a,b]

Observed		Predicted		
		pofeoc		Percentage Correct
		.00	1.00	
Step 0	pofeoc .00	0	44	.0
	1.00	0	56	100.0
	Overall Percentage			56.0

a. Constant is included in the model.

b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	.241	.201	1.433	1	.231	1.273

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	taksraw	60.780	1	.000
		sophjr(1)	.688	1	.407
	Overall Statistics		60.932	2	.000

Block 1: Method = Enter

Iteration History[a,b,c,d]

Iteration		-2 Log likelihood	Coefficients		
			Constant	taksraw	sophjr(1)
Step 1	1	65.928	-7.539	.195	.168
	2	45.755	-14.247	.361	.287
	3	37.506	-21.506	.541	.382
	4	34.995	-28.022	.702	.508
	5	34.629	-31.676	.792	.607
	6	34.618	-32.460	.811	.633
	7	34.618	-32.489	.812	.634
	8	34.618	-32.489	.812	.634

a. Method: Enter

b. Constant is included in the model.

c. Initial -2 Log Likelihood: 137.186

d. Estimation terminated at iteration number 8 because parameter estimates changed by less than .001.

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	102.568	2	.000
	Block	102.568	2	.000
	Model	102.568	2	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	34.618[a]	.641	.859

a. Estimation terminated at iteration number 8 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	5.354	7	.617

Contingency Table for Hosmer and Lemeshow Test

		pofeoc = .00		pofeoc = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	9	9.000	0	.000	9
	2	10	9.990	0	.010	10
	3	10	10.817	1	.183	11
	4	10	9.597	2	2.403	12
	5	5	3.719	8	9.281	13
	6	0	.662	11	10.338	11
	7	0	.166	10	9.834	10
	8	0	.042	10	9.958	10
	9	0	.007	14	13.993	14

Classification Table[a]

			Predicted		
			pofeoc		Percentage Correct
	Observed		.00	1.00	
Step 1	pofeoc	.00	41	3	93.2
		1.00	4	52	92.9
	Overall Percentage				93.0

a. The cut value is .500

Variables in the Equation

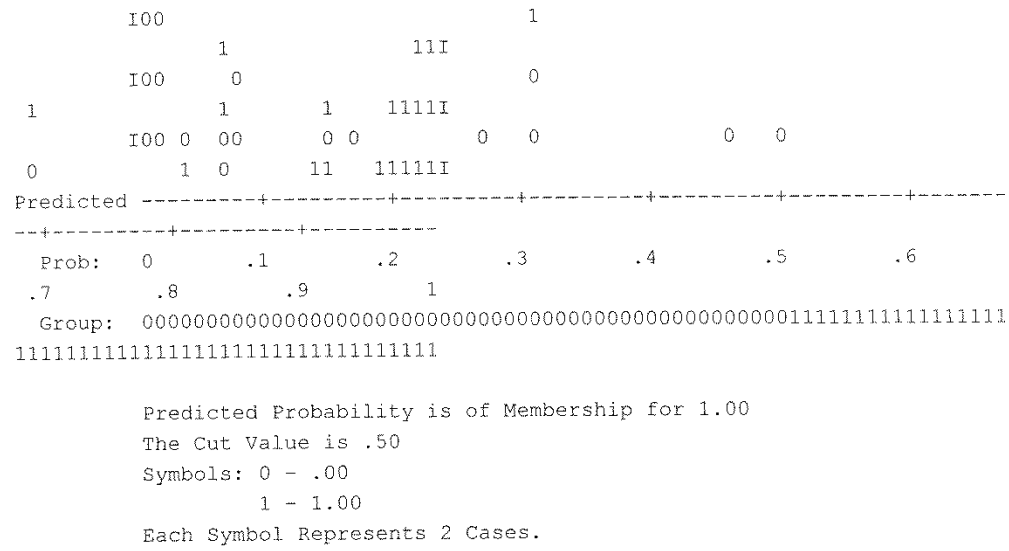
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	taksraw	.812	.192	17.819	1	.000	2.252
	sophjr(1)	.634	1.024	.383	1	.536	1.885
	Constant	-32.489	7.807	17.318	1	.000	.000

a. Variable(s) entered on step 1: taksraw, sophjr.

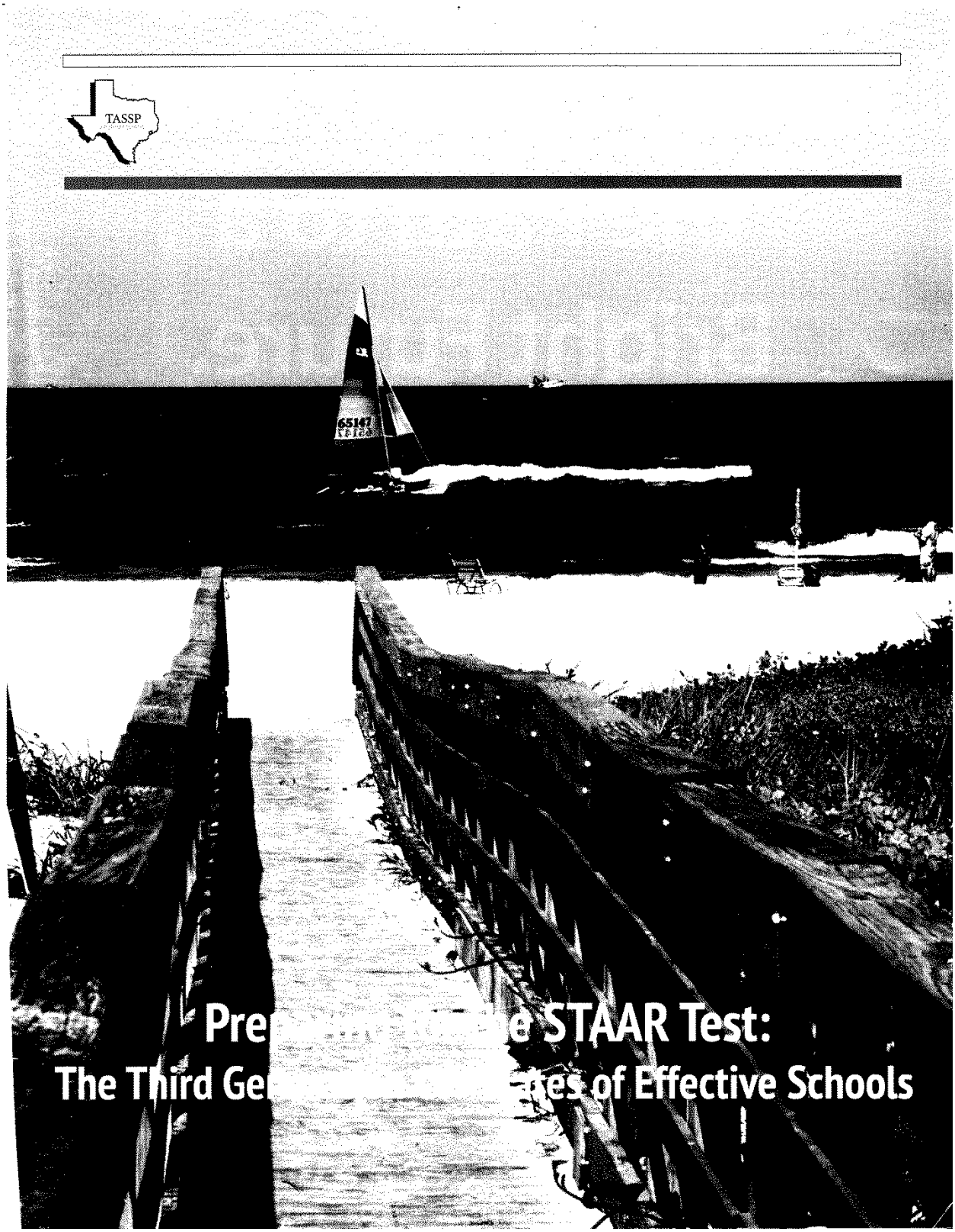
Step number: 1

Observed Groups and Predicted Probabilities

```
        32 +                                                  +
           I                                                  I
           I                                                  I
F          I                                                 1I
R       24 +                                                 1+
E          I0                                                1I
Q          I0                                                1I
U          I0                                                1I
E       16 +0                                                1+
N          I0                                                1I
C          I0                                                1I
Y          I0                                                1I
         8 +0                                                1+
```



Predicted Probability is of Membership for 1.00
The Cut Value is .50
Symbols: 0 - .00
1 - 1.00
Each Symbol Represents 2 Cases.


TASSP
65147
Pre e STAAR Test:
The Third Ge tes of Effective Schools

TEXAS STUDY

Vol. XXI, No. 2 OF SECONDARY EDUCATION Spring 2012

Spring leads to fun on South Padre Island. Photo courtesy of Texas Department of Transportation

Articles were submitted by educators and others in related education fields. Articles on any subject concerning current education trends, innovative programs, etc., are welcome. The *Texas Study* presents articles on the major topics of leadership and learning in each issue. If you are interested in receiving information about writers' guidelines or if you have an article that you would like to submit, please contact: TASSP, The *Texas Study*, 1833 South IH 35, Austin, Texas 78741, 512-443-2100, or Fax: 512-442-3343. Send advertising queries to the same address.

The *Texas Study* is published in November and April by the Texas Association of Secondary School Principals.

Articles in the *Texas Study* are the expressions of the author and are neither endorsements nor statements of TASSP policy. Copies of the *Texas Study* are mailed to TASSP members. Subscriptions are available to non-members for $20 year or $10/issue. Address changes should be sent to TASSP, 1833 South IH-35, Austin, TX 78741 or E-Mail: membership@tassp.org

SpotlightArticle

Preparing for the STAAR Test: The Third Generation Correlates of Effective Schools

By Dr. William L. Johnson & Dr. Annabel M. Johnson

The 82nd session of the Texas Legislature, and the special session that followed, left educators wondering if our elected officials really cared about Texas' students. The elimination of approximately $4 billion over the next biennium has resulted in severe changes in Texas schools.

Administrators and teachers are being asked to do much more with much less. Furthermore, we see the new STAAR evaluation program committed to testing students at a deeper cognitive level. We see instructional program changes, student-level learning scaffolding to transition from TAKS to STAAR, and diminished teacher classroom support even as many schools are being forced to move to seven or eight instruction periods per day. It does seem that the legislative solution to our educational needs has been to cut taxes and spending, concentrate on closing schools, promoting charters, giving out vouchers, putting students online without teachers, and increasing class sizes. We can thank the federal government not only for its real overreach in the 2001 No Child Left Behind Act (NCLB), but also for the current administration's pursuit of unproven teacher-evaluation requirements and demand for federal compliance in light of its stated policy of openness and cooperation.

As though this was not enough, Texas Education Agency statistics note that 55 percent of Texas students are from economically disadvantaged families, 10 percent are in special education and 17 percent are limited English proficient. Meanwhile, passing rates for English language learners (ELL) and low-income students on state achievement tests have lagged. As new standards for college readiness have come into effect, the lag is even more pronounced with only 38 percent of low-income students and five percent of ELL students deemed college-ready by the state's definition.

Furthermore, it's truly shocking that half of all teachers leave the profession in their first five years. This turnover costs school districts $7 billion annually. Surveys show that two thirds of all teachers work a second job because they can't support their families on a teacher's salary. Meanwhile, on average, teachers spend between $350 and $500 a year, or $1.3 billion combined, of their own money on materials for their students. In light of all this, Texas' teachers will tell you they have an enduring love for students and education, and they are proud to be part of the solution to the "broad brush" of failure generally painted over our schools.

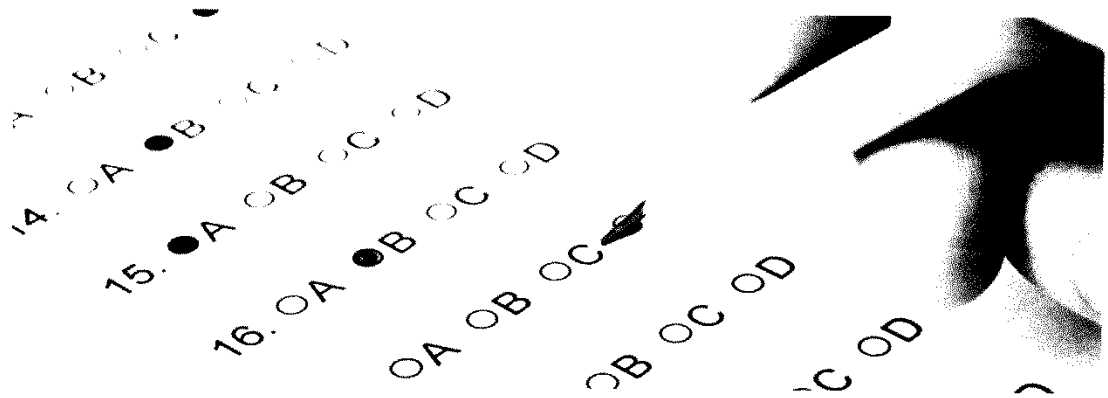
We know that the public school system was never designed to successfully teach a high-standards curriculum to the ever more diverse student population. However, one proven system, with more than three decades of school research, has focused on what works in schools. That is our next story.

The Effective Schools Research

During the past 12 years of TAKS testing, many Texas school districts have relied on the effective schools research as the framework for managing and improving their schools. This is especially true for schools rated as unacceptable and for Title I schools. Recall that is was the late Ronald Edmonds' (1979) description of the characteristics (correlates) of effective schools that launched the effective schools movement in the United States. The effective schools movement has been a major force in American education during the past three decades, and today it continues to exert enormous educational influence. However, although first generation correlates have been successful and have stood the test of time, our understanding of the effective schools characteristics deepened and broadened into the "Second Generation Correlates of Effective Schools" (Lezotte, 1991).

This expansion has included: instructional leadership; clear and focused mission; safe and orderly environment; climate of high expectations; frequent monitoring of student progress; positive home-school relations; and opportunity to learn and student time on task. Furthermore, the original focus just on curriculum has been expanded to include higher-order thinking skills and problem-solving abilities.

For example, to challenge assessments successfully in science, students need to be able to understand and use formulas; draw inferences; communicate conclusions and evidence; collect and organize



data; analyze, evaluate and critique data; plan and implement experiments; evaluate changes based on data; and plan, implement and ask questions based in scientific settings. Generically, these skills and abilities encompass observation, communication, classification, measurement, inference and prediction.

> "The problem is not that we set our goals too high and fail to reach them, but that we set them too low and reach them."
> – Michaelangelo

These curriculum changes have been a major focus of the expansion of the effective schools characteristics because of the federally-mandated NCLB legislation. The federal legislation set target dates for school improvement but really never told school officials – especially those with high poverty rates, shortages of qualified teachers and limited resources – how to make the improvements. The authors have written extensively to show how to apply these broadened effective school characteristics to provide for high quality school leadership (Johnson & Johnson, 1991; Johnson & Johnson, 2010; Johnson, Johnson & Gilliam, 2003; Johnson, Snyder & Anderson, 1992; Snyder, Anderson & Johnson, 1992).

As was noted, the effective schools literature first relied only on the description of the characteristics of effective schools (Edmonds, 1979). Researchers then expanded the literature to include actual statistical correlations. However, correlations are affected by sample sizes. Not that researchers disagreed with the success of the effective schools model itself, but, with the advent of new statistical methodologies, researchers saw that research should include meta analysis and effect sizes so the literature could distinguish between effective and ineffective school practices (Coe, 2002; Glass, McGaw & Smith, 1981; Hattie, 2003; Marzano, Pickering & Pollock, 2001).

These changes have catapulted the effective schools framework to a whole new level. These authors refer to changes in this school management model as the "Third Generation Correlates of Effective Schools." This framework provides an excellent vehicle through which educators can create the kind of continuous and sustainable improvement called for in today's schools. Specifically, one can now reference this literature and find an effect size when a particular approach to teaching or educational technique is used in the school or classroom. Effect size is simply a way of quantifying the size of differences between two groups. It is easy to calculate, readily understood and can be applied to any measured outcome in education, medicine or the social sciences. Meta analysis is a systematic method that takes data from a number of independent studies and integrates them using statistical analysis, commonly by calculating effect sizes.

Moreover, an effect size is exactly equivalent to a 'z-score' of a standard normal distribution. For example, an effect size of 0.8 means that the score of the average person in the experimental group is 0.8 standard deviations above the average person in the control group, and hence it exceeds the scores of 79 percent of the control group (Coe, 2002). Development effects are 0.0 to 0.15, and this is the improvement maturation expected if growing up without any schooling. Teacher effects are typically 0.20 to 0.40 a year. Desired effects are those above 0.40 and are attributable to specific interventions. Effect sizes below 0.40 are considered average. An effect size of 1.0 would indicate an increase of one standard deviation and is associated with advancing a student's achievement by one year. An effect size of 1.0 would indicate, on average, that the student's achievement exceeded 84 percent of students who did not receive the education "treatment."

Hattie (2003) summarized the findings of advanced statistical studies to explain student achievement in school. His synthesis of more than half a million studies identified the major factors (percent of variance accounted for) in student achievement as follows: students (50 percent), home (5-10 percent), schools/principals (5-10 percent), peers (5-10 percent) and teachers (30 percent). As one might expect, it is what students "bring to the table" that predicts achievement more than any variable. Principals who create a school with high student responsiveness and a climate of learning rather than bureaucratic control are most effective. For teachers, it is what they know, do and care about that is very powerful in student achievement. Excellence in teaching is the single most powerful influence on student achievement

The powerful classroom effects on student learning include the learning of effective outcomes, respect and caring, and the quality of

achievement. Expert teachers are identified in the way they represent their classrooms, the degree of challenges they present to their students, and, most critically, in the depth of processing their students attain. Students taught by expert teachers exhibit an understanding of concepts targeted in instruction that is more integrated, coherent and at a higher level of abstraction than the understanding achieved by other students.

> "In times of drastic change, it is the learners who inherit the future. The learned usually find themselves beautifully equipped to live in a world that no longer exists."
> - Eric Hoffer, 1972

The exemplary teachers get to know their students and touch them emotionally. They relate to their students, build trust and encourage their students. They teach, coach and guide. Generally, we see that our at-risk students are from broken homes and have behavioral and emotional problems. Since the term "emotional problem" sounds so bad, schools use the term "behavioral problem." However, students with emotional or behavioral problems exhibit the following characteristics: (a) an inability to learn that cannot be explained by intellectual, sensory or health problems; (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (c) inappropriate types of behavior or feelings under normal circumstances; (d) a general mood of unhappiness or depression; and (e) a tendency to develop physical symptoms or fears associated with personal or school problems.

> "Leadership is communicating people's worth and potential so clearly that they are inspired to see it in themselves."
> -- Stephen R. Covey

It is little wonder that exemplary teachers know how to model the learning of effective outcomes in their classes (Johnson & Johnson, 2010). For at-risk students, doing simple things like giving them a piece of candy or treat helps to build a climate of warmth, trust and caring. This is basic behavior theory. For the most at-risk students, if all they did was to identify with the teacher, the teacher would have been successful.

Additional Effect Sizes

Hattie (2003) further identified effect sizes as noted in Table 1.

As noted in the table, the major influences on student achievement are in the hands of the excellent teacher. We generally are looking for effect sizes greater than 0.40. Some influences have effect sizes below 0.40 and are marginal in benefit, while other influences are negative and reduce learning. Interestingly, feedback (not testing) is the largest effect size. The implication is that we should provide information about how and why the student understands and misunderstands. Tests can provide this function, but too often they are devoid of much feedback to students as teachers test, record grades and rush ahead to the next topic never to even go over the test with the students. Such is a genuine tragedy and devoid of much benefit, considering the most powerful single moderator that enhances achievement is feedback.

TABLE 1. INFLUENCE	EFFECT SIZE	SOURCE OF INFLUENCE
Feedback	1.3	Teacher
Students Prior Cognitive Ability	1.04	Student
Instructional Quality	1.00	Teacher
Direct instruction	.82	Teacher
Remediation/feedback	.65	Teacher
Students disposition to learn	.61	Student
Class environment	.56	Teacher
Challenge of goals	.52	Teacher
Peer tutoring	.50	Teacher
Mastery learning	.50	Teacher
Parent involvement	.46	Home
Homework	.43	Teacher
Teacher style	.42	Teacher
Questioning	.41	Teacher
Peer effects	.38	Peers
Advance organizers	.37	Teacher
Simulation & games	.34	Teacher
Computer-assisted instruction	.31	Teacher
Testing	.30	Teacher
Instructional media	.30	Teacher
Aims & policy of the school	.24	School
Affective attributes of students	.24	Student
Physical attributes of students	.21	Student
Programmed instruction	.18	Teacher
Ability grouping	.18	School
Audio-visual aids	.16	Teacher
Individualization	.14	Teacher
Finances/money	.12	School
Behavioral objectives	.12	Teacher
Team teaching	.06	Teacher
Physical attributes (e.g., class size)	-.05	School
Television	-.12	Home
Retention	-.15	School

Conclusion

This article was written to focus our attention on the new generation of school research. The essence of this article is that it is what teachers know, do and care about that is very powerful in the learning equation. Excellent teachers challenge their students, provide deep representation in knowing what to teach and how to organize and structure what they teach, monitor their students' progress, and provide meaningful feedback. Improving the academic performance of our diverse student population is difficult at any age, but especially so for teenagers whose challenges, personal habits

and social networks are firmly established. This article and the cited literature hopefully will help all of us as we look at the Third Generation Correlates of Effective Schools research to clarify what is needed to build student excellence and effectively challenge the new STAAR testing program.

REFERENCES

Coe, R. (September 2002). It's the effect size, stupid. Paper presented at the annual conference of the British Educational Research Association, University of Exeter, England.

Edmonds, R. (1979). Effective schools for the urban poor. Educational Leadership, 37, 20-24.

Glass, G.; McGaw, B. & Smith, M.L. (1981). Meta-analysis in social research. Beverly Hills, CA: Sage Publishing.

Hattie, J. (October 2003). Teachers make a difference: What is the research evidence? Paper presented at the Australian Council for Educational Research Annual Conference on Building Teacher Quality, Melbourne.

Johnson, W.L. & Johnson, A.B. (1999). World-class schools in the 21st century. Bulletin National Association of Secondary School Principals, 83(606), 26-32.

Johnson, W.L. & Johnson, A.B. (2010). An innovative program that results in science school improvement. Texas Study of Secondary Education, 19(2), 21-23.

Johnson, W.L.; Johnson, A.B.; Hunt, M.J. & Gilliam, B. (2002). The second generation correlates of effective schools. Texas Study of Secondary Education, 11(1), 3-6.

Johnson, W.L.; Snyder, K.J. & Anderson, R.H. (1992). Organizational productivity and the school-based restructuring challenge. Journal of Staff Development, 13(4), 46-50.

Lezotte, L.W. (1991). Correlates of effective schools: The first and second generation. Okemos, MI: Effective Schools Products, Ltd.

Snyder, K.S.; Anderson, R.H. & Johnson, W.L. (1992). A tool kit for managing productive schools. Educational Leadership, 5, 76-80.

(Authors' Note -- A version of this article was presented at the annual conference of the Science Teachers Association of Texas (STAT), Dallas, Nov. 17-19, 2011).

About the Authors:

***William L. Johnson, Ed.D.**, a patentee in chemistry, is with Tyler ISD. Having served as a consultant in industry/education and published more than 225 articles, he has an enduring love for education and students. He believes the light at the end of the tunnel is not another train. He holds a doctorate from Texas Tech University.*

***Annabel Johnson, Ph.D.**, a former college professor, has written more than 100 articles. She has travelled the world and worked with international governments. She has a doctorate from Texas Tech University.*