

# Preparing U.S. Schools for the 21<sup>st</sup> Century

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## A Coherent Systems Approach

The International Center for Leadership in Education for many years has worked with the nation's K-12 schools of all levels — the highest performing, those that are struggling, and more recently, the most rapidly improving, a group from which we have learned a tremendous amount. During this time, we have discovered important lessons about what it takes to drive real change to markedly improve our education system to keep up with the rapid changes of our global society.

One of the most important lessons we have learned is that effective and sustained school improvement begins with creating a shared vision toward change that is based on rigor, relevance, and relationships for all students. Once the need for change is embraced by the entire school community, then a consensus must be built among all stakeholders on what needs to change and how the process of reform will take place. The reform process must include measurable goals and actions.

It is critical that schools take such a coherent systems approach in supporting our young people. Everyone involved in and around the districts and schools must be pushing toward the same agenda and have the same priorities. What the teacher is working on must be supported by the guidance counselor. What the guidance counselor is working on must be supported by the principal. What the principal is working on must be supported by the superintendent, and so on. Student learning goals must be known and supported by everyone in the school community. In the nation's most successful schools, students, instructional staff, administrators, parents, and community members know and embrace their role in and responsibilities for assisting student learning.

Three general characteristics are found in this coherent systems approach.

1. Students must be actively engaged in their own learning process. The student has to do the bulk of the work. Schools cannot improve the academic performance of students by doing something *to* them. Students must be actively engaged and take responsibility for their learning. Being actively engaged in the learning process gives purpose and direction to student aspirations. There are successful practices and tools that have been identified in the nation's most rapidly improving and successful schools to help districts and individual schools accomplish this, as described in this paper.
2. The curriculum must have content that is both academically rigorous and relevant to students. If students are to be engaged in the learning process, they have to see the relevance of what they are learning. In effect, relevance leads to rigor.
3. Teachers need to have up-to-date skills and knowledge in the disciplines in which they teach, but they need to be teachers first, experts second. They also need to incorporate teaching practices that promote the relevancy of what they are teaching. The 21<sup>st</sup> century learner is fundamentally different than those of the past. The instructional strategies and practices used will vary based upon how these students learn best.

In scouring successful practices across the country, the International Center also has learned another important lesson: every school has its own unique "DNA." School traditions, facilities, community

expectations, staffing configurations, etc. vary greatly. This means there is no single formula for improving all schools. Moreover, a combination of strategies is necessary to achieve a new vision of learning for each school. But, no matter what situation a school finds itself in, a coherent systems approach is essential in finding the tools and strategies needed to move forward.

## **Redefining the Role of Schools — *Why Change?***

Schools are doing a better job than ever before at a time when they have more standards to cover and students have more tests to pass than any group of students in our nation's history. In addition, the range of diversity of our students — ethnically, culturally, and intellectually — has never been greater and more accurately mirrors the diversity in American society.

On average, dropout rates are the lowest in the country's history. Internationally, the United States does not have the highest educational standards. However, it has the deepest commitment to equity. The International Center has found no system that compares to America's public education system in the balance of equity and excellence. Yet, without excellence in comparison to international standards, the United States will find it increasingly difficult to provide its people with equitable opportunities. We have to remember that technology has allowed millions of students from developing countries to acquire critical problem-solving and effective communication skills — not to mention a plethora of information at their fingertips — all of which has essentially leveled the proverbial global playing field.

### **Society Demands Better Prepared Students**

Unfortunately, while our school system is getting better at educating all students, many young people lack the basic education they need to be successful. This is not because schools have failed, but because society demands a higher and different set of skills than schools were ever designed to teach. So, despite that schools are improving, our students are falling further behind. The simple fact is we have encountered a skills gap. This gap is further defined by our own country's commitment to excellence and equity in that we want ALL students to be successfully prepared to become independent and productive citizens.

Changes in science and technology are occurring much more rapidly than ever before. While technological innovations bring many benefits, there is little argument that they add to the complexity of our world and increase the skill level every person needs to function effectively in society. We don't know exactly where the future will take us, but as technology continues to advance, it will continue to alter the workplace and our homes, our personal lives, and education systems.

Interestingly, in the United States, students appear to be learning the majority of technology skills in settings other than through formal schooling. Certainly, students continue to receive the requisite of core subject matter in schools, but the skills they need to compete in the information age – relevant 21<sup>st</sup> century skills such as critical thinking, problem solving, technology skills, and effective communication – are acquired outside the classroom.

Perhaps the biggest mistake that schools continue to perpetuate is that they simply are in the wrong races. One is the race in which the state test is considered the finish line instead of the starting point (see “A Narrow Focus” on Page 17 for more on this topic). The second race involves trying to keep up with students' technological abilities. The challenge for educators is not to dismiss or keep up with students' latest technological know-how, but to create meaningful learning experiences in which students are taught how to *apply* their knowledge to solve real-world problems. The best way to make learning meaningful — with or without technology — is by appealing to a student's interests, learning style, and aptitudes.

Unfortunately, most American schools are not organized for application or contextualized instruction, even though we know that when we teach students how to apply knowledge, they understand it, retain it, and perform well on tests.

## **21<sup>st</sup> Century Learners**

The thinking processes of today's student have evolved on multiple levels, much in the same way that thinking and reasoning evolved when Ancient Greece adopted and modified the phonetic alphabet, originally developed by the Phoenicians. Because it was at the time the most efficient means of processing information, the alphabet caused a giant leap in cognitive ability over time, with many ethnic groups modifying the alphabet to fit their language needs. This new form of literacy replaced what was at the time the most prominent form of writing, Egyptian hieroglyphics, a pictorial language of symbols and phonetics used for more than 3,000 years. The printing press brought about another literacy revolution by allowing information to be much more accessible to a larger part of the population. New forms of writing such as newspapers and novels took hold, and new ideas spread rapidly, advancing science and technology by leaps and bounds.

New forms of communication derived from information technology have caused another cognitive leap. The new generation of youth is the first to be exposed to hyperlinks and global resources that allow them to make multiple connections in seconds. They are accustomed to computers, video games, digital music players, instant messaging, and cell phones. As a result of this globalized technological experience, their thinking patterns have changed in how they process information and solve problems. On one level, they have become multitaskers submerged in a sea of information. Today's youth can surf the Net, check their e-mail, chat with friends, listen to music, and do their homework at the same time. On another level, they have a highly developed sense of information space. That is, they can intuitively and swiftly navigate back and forth to retrieve the information they need or want. And, they want that information fast. They view textbooks almost as artifacts, with no patience to thumb through each page of a single-viewpoint source of information.

At some point, educators in today's classrooms will have to admit that, as a result of technology, students have more information and technology at their disposal. Educators also need to acknowledge that technology will not go away if they just close their eyes. Still, the older but wiser generations of teachers can play an integral role in helping students realize their futures by providing them with instruction that gives direction and allows them to hone their new cognitive and technological skills.

In their virtual world, students need to learn how to:

- access information efficiently and effectively
- evaluate information critically and competently
- apply information accurately
- understand the ethical, legal, and moral issues concerning the access and use of information

As imparters of wisdom, educators also need teach students how to:

- assess the validity and accuracy of information
- determine value of information
- identify bias or propaganda
- create meaning from data

In reaching out to students who are so intertwined with the latest technology, teachers need to ask themselves such questions as, “How can we use the Internet or the computer to enhance instruction and engage students?” In math, for example, the issue should no longer be whether calculators and computers should be used in the classroom, but how this technology can be used to enhance instruction and skills. Science teachers might consider, for example, how to use Microsoft’s recently launched WorldWide Telescope, a Web site that enables a computer to function as a virtual telescope by incorporating worldwide imagery from ground and space-based telescopes for a seamless exploration of the universe.

In high-performing schools, technology is used on a regular basis as a tool, not as a flashy augmentation. In these schools, teachers are fully competent in using technology to engage their students in the learning process. They access Internet resources, use laser pointers and PowerPoint slides, and connect graphic calculators to TV monitors. For these teachers, technology doesn’t sit idle in the classroom, but rather enhances instruction as a tool, just as a pencil or a chalkboard is a tool. Elementary teachers, for example, might use short (under five minutes) video clips to provide students with visuals to help clarify concepts and bring relevancy to a lesson. Middle grade and high school teachers can turn to the Internet to teach students how to raise social consciousness to a particular cause and learn about personal responsibility. Again, this goes back to the fact that students have the technology, but they need the content to be fully capable citizens.

## Student Engagement

So, how do we help students become capable citizens who are involved in their society? It starts by engaging students in the classroom. Unfortunately, the fact is that thousands of students are disengaged and behave in ways that show a lack of understanding and comfort with the purpose and practices of schools. Many students go through the motions of showing up at school but fail to complete any productive work, while others drop out and end their formal education. About 1.2 million students every year do not graduate on time from high school, according to the Alliance for Excellent Education.

### The Classroom

It is easy to observe the lack of student engagement when students in the classroom are slouched in their chairs and not listening to the teacher or participating in the classroom discussion. Many teachers who constantly see disengaged students lament that they could be better teachers and have better learning results if they had the opportunity to work with a “better” group of students. But classrooms with high levels of student engagement are not simply a result of “student quality.”

Prior experiences, attitudes, and perceptions affect how engaged students are in the classroom. But teachers are not limited to poor learning results because students are not engaged. For teachers to deal with levels of poor student performance, they must begin to reflect on the elements that contribute to student engagement. Teachers can have direct control and make changes instantaneously in some areas. For other changes to occur, it will take time to develop new skills for both the student and the teacher, plan and seek out new solutions, or work on making changes at both the classroom and schoolwide level. Elements that support and encourage student engagement include:

1. **Cultivate one-on-one relationships.** The one-on-one relationship between student and teacher is the critical element that can lead to increased student motivation and higher levels of engagement in academic achievement and school life.
2. **Learn new skills and habits.** Teachers can learn new skills and habits that help them to develop, polish, and enhance their already natural inclination to motivate and engage students.

3. **Incorporate systematic strategies.** Teachers can learn systematic strategies and approaches that facilitate student engagement. Students can develop behavioral skills and habits that lead to increased academic achievement and greater involvement with school life.
4. **Take responsibility for student engagement practices.** It is primarily the teacher's responsibility to engage the students, as opposed to the teacher expecting students to come to class naturally and automatically engaged.
5. **Promote a schoolwide culture of engagement.** The best way to promote high levels of student engagement is to develop and maintain a schoolwide initiative that is dedicated to creating a culture of student engagement, involving students in school life activities, and a rigorous and relevant education for all students.
6. **Professional development is an important part of increasing student engagement.** Staff development, combined with staff ownership and recognition, will be a critical part of developing and maintaining a culture of effective student engagement.

## School Culture

Student engagement is not only a result of individual teacher practices, but also is heavily influenced by the overall culture of a school, which directly impacts each student. An engaging school culture seems inviting, exciting, empowering, and safe to a student. A disengaging school seems impersonal, overwhelming, and threatening. Not all students will respond in the same manner, but culture does make a difference.

People, policies, procedures, community partners, and the physical structures all contribute to defining the school culture and the degree to which it is engaging to students. Following are some characteristics of an engaging culture:

- Interactions between and among students, teachers, administrators, parents, etc., are respectful, collegial, and warm.
- There is a sense of mutual accountability; people feel a sense of responsibility to one another and to the larger school community.
- The learning environment is both welcoming and relevant to students.
- Diversity is valued and encouraged.
- Students take a leadership role in representing and “owning” the school, exhibiting energy and enthusiasm about their institution.
- The school engages parents and community members in assessing student work and defining mastery.
- The physical space is clean and safe.

Once they are engaged, students have confidence to take action and are more likely to take rigorous courses and apply higher order thinking skills, such as analysis and evaluation, to apply knowledge learned in the classroom to real-world unpredictable situations. They begin to make connections from one

content area to the next and learning becomes both rigorous and relevant. Moreover, students engaged in the pursuit of academic success not only are learning information in a more productive fashion, but they also are learning how to apply that information and apply themselves to the learning process.

## **The Solution: A Model for Change**

The nature of change for school improvement is that it must be unique to local needs, forged through consensus, and built upon the unique strengths of each school. There is no one single solution to improving all schools, no recipe with a list of ingredients or simple steps. The goal is not to make every school the same, but to enable each school to construct its own solutions.

However, every best practice need not be invented from scratch. Many successful practices are replicable to some extent and, therefore, there are lessons that can be learned from other schools. The International Center has worked with educators across the country to identify models, share best practices, conduct research, and support school leaders in facilitating changes that lead to improvement. This work has revealed that schools usually need to address four interconnected questions in order to achieve high academic standards for all students — *why*, *what*, *where*, and *how*. All schools must start with the *why* question. Next, the *what* question builds a common focus on what to change. Third, schools must set a direction with the *where* question. Finally, the *how* question deals with the implementation of change. To further elaborate:

- **Why** (detailed in the previous section) involves convincing educators, parents, and community members as to why a school needs to change.
- **What** is the content of change, built through a common focus. It involves using good data, research, and best practices to determine what needs to change once people understand why.
- **Where** defines the location and direction, which involves assessing the present status, agreeing on a common direction, and defining ways to measure improvement in student achievement.
- **How** determines the way in which change will be implemented once people understand and embrace the why, what, and where.

Regrettably, many schools begin their improvement efforts in the reverse order by first deciding how to do things differently. That is, they find a “solution” without clearly articulating the need or problem. Yet, if staff and stakeholders do not believe their school must change or understand what needs to change, the suggestion for how to change is likely to be ineffective or rejected. The solution is worthless for a problem that has not been acknowledged.

### **The *What* of Change: Aspire for Rigor, Relevance, and Relationships for All Students**

Finding successful practices in K-12 education that adequately prepare students for a changing world has been the purpose of the International Center since its inception in 1991. In focusing on this purpose, we have created a basic philosophy: *rigor and relevance for ALL students*.

Although school districts across the country are increasingly using the words “rigor” and “relevance,” these terms are seldom defined. To solidify these terms across the spectrum of learning, the International Center has incorporated them in a framework for defining what to change in schools and how to organize curriculum and instruction to prepare all students for the future.

Increasingly, the International Center has been focusing on a third “R”: relationships. Schools across the country are realizing that rigor and relevance develop most naturally when they are cultivated on firm grounding in relationships.

### **Defining Rigor**

Academic rigor refers to learning in which students demonstrate a thorough in-depth mastery of challenging tasks to develop cognitive skills through reflective thought, analysis, problem solving, evaluation, or creativity. It is the quality of thinking, not the quantity, that defines academic rigor, and rigorous learning can occur at any school grade and in any subject.

### **Defining Relevance**

Relevance refers to learning in which students apply core knowledge, concepts, or skills to solve real-world problems. Relevant learning is interdisciplinary and contextual. Student work can range from routine to complex in any grade and any subject. Relevant learning is created, for example, through authentic problems or tasks, simulations, service learning, connecting concepts to current issues, and teaching others.

There are students who do extremely well academically, but who seem to be dysfunctional in the world beyond school. They lack the ability to apply their knowledge to real-life situations. Rigor without relevance can enable students to be successful in school, but result in failure once they no longer have that structure and guidance.

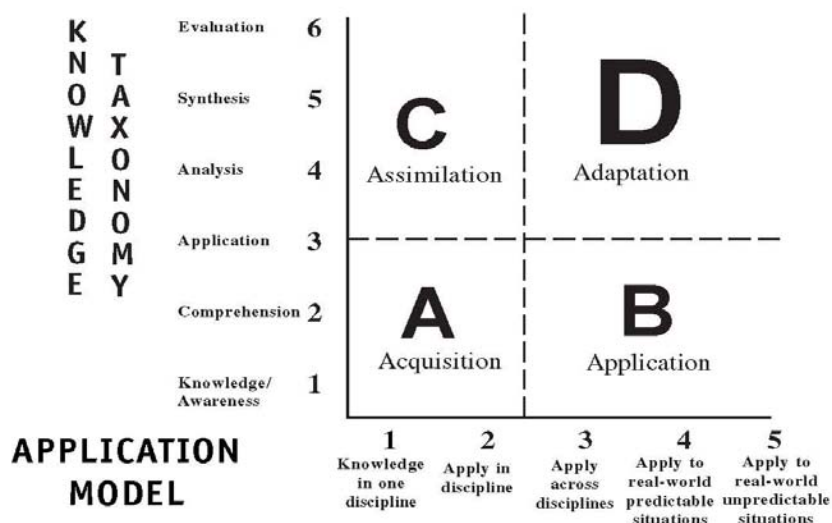
### **Rigor/Relevance Framework™**

The International Center developed the Rigor/Relevance Framework™ to ensure the inclusion of both rigor and relevance. The Framework enables teachers to examine curriculum and plan instruction and assessment. The Framework consists of four quadrants that reflect these two dimensions of higher standards and student achievement.

First, there is the Knowledge Taxonomy,” which describes the increasingly complex ways in which we think. It is based on the six levels of Bloom’s Taxonomy: knowledge/awareness, comprehension, application, analysis, synthesis, and evaluation.

The second dimension is the Application Model, developed by the International Center, that describes five levels of relevant learning: knowledge in one discipline, apply knowledge in one discipline, apply across disciplines, apply to real-world predictable situations, and apply to real-world unpredictable situations. Relevant learning is interdisciplinary and contextual. It requires students to apply core knowledge, concepts, or skills to solve real-world problems.

## Rigor/Relevance Framework™



In Quadrant A (Acquisition), students learn and store bits of knowledge and information. Quadrant B (Application) requires students to use their acquired knowledge to solve practical problems. In Quadrant C (Assimilation), students extend their acquired knowledge to use it automatically and routinely to analyze problems and create unique solutions. When working in Quadrant D (Adaptation), students have the competence to think in complex ways and apply their knowledge and skills when confronting perplexing unknowns and creating solutions.

One way to think about this framework in day-to-day instruction is in terms of the roles that teachers and students play. When instruction and expected student learning is in Quadrant A, the focus is on “teacher work.” Teachers expend energy to transmit content through learning activities, worksheets, and other assignments. The student is often a passive learner.

When student expectation moves to Quadrant B, the emphasis is on the student doing real-world tasks. This student work is often more complicated than Quadrant A work and requires more time. Learning in Quadrant B is best described as “student work” because students are doing extensive real-world tasks.

Learning in Quadrant C is best described as “student think.” In this quadrant, students are expected to think in complex ways — to analyze, compare, create and evaluate.

Quadrant D activity can be characterized as “student think and work.” Learning in Quadrant D is demanding and requires students to apply their thinking and knowledge in complex ways to solve difficult problems. Roles shift from teacher-centered instruction in quadrants A and C to student-centered instruction in quadrants B and D. In these quadrants, teachers still work hard, but their role is more as a coach or facilitator of learning.

Good instruction is not a choice of a single quadrant but a balance. It may not be necessary for all students to achieve mastery of content in Quadrant A before proceeding to Quadrant B, for example. Some students may learn a concept better in Quadrant B when they see its application in a real-world situation. But no matter what the grade level, students require Quadrant B and D skills if they are to

become lifelong learners, problem solvers, and decision makers. In essence, students need to *know what to do when they do not know what to do*. The Rigor/Relevance Framework provides a structure to enable schools to move all students toward that goal.

Kennesaw Mountain High School in Kennesaw, Georgia, is one of several of schools that have built their curricula around the International Center's Rigor/Relevance Framework™ to achieve academic excellence. The high school of 3,100 students serves as a national model of how to hold high expectations for all students and meet individual student needs within a large school.

Through professional development activities, teachers have a clear understanding of how to achieve rigor and relevance in using the Framework. They work in collaborative groups to create high rigor/high relevance activities and alternative assessments in Quadrant D in which students are expected to show insight by applying what they have learned to other situations and circumstances.

Students also are expected to analyze materials effectively, both orally and in writing. Through the use of the Framework, students and teachers speak the same language in identifying effective classroom instruction and assessment.

One example of an engaging activity that incorporates Quadrant D learning is a team-taught technology and English class in which groups of students each select a technology and project how it may change in the future. They then identify what breakthroughs are required for the “new” technology to become a reality as well as describe the potential positive and negative consequences on society.

### **Relationships: The Foundation for Rigor and Relevance**

Strong relationships are critical to completing rigorous work. Students are more likely to make a personal commitment to engage in rigorous learning when they know that teachers, parents, and other students actually care about them. Creating an appropriate environment for learning begins with establishing ground rules that include many of the aspects of quality teaching, such as respect, responsibility, honesty, civility, and tolerance. Only after these values are established with students in the classroom can real learning based on the other two essential Rs — rigor and relevance — begin to accelerate.

#### *Relationship Framework*

To help educators identify and quantify relationships that improve learning, the International Center developed a taxonomy called the Relationship Framework, which consists of seven levels of relationships.

| <b>Relationship Framework</b>                        |  |
|--|--|
| <b>Learning Relationships — Support for Students</b> |  |
| 0. Isolated  | Students feel significant isolation from teachers, peers, or even parents. Students lack any emotional, social connection to peers and teachers.   |
| 1. Known   | Students are known by others, frequently called by name. Teachers know students and their families, interests, aspirations, and challenges. Students are known by their peers.   |
| 2. Receptive   | Students have contact with peers, parents, and teachers in multiple settings. Teachers exhibit positive behaviors of “being there” and show genuine interest and concern.  |
| 3. Reactive  | Teachers, parents, and peers provide help to students when requested, but support may be sporadic and inconsistent among support groups.   |
| 4. Proactive   | Others take an active interest in a student’s success. Teachers take initiative to show interest and provide support. Students and others express verbal commitment for ongoing support and validate this commitment with their actions. |
| 5. Sustained   | There is extensive, ongoing, pervasive, and balanced support from teachers, parents, and peers that is consistent and sustained over time.   |
| 6. Mutually Beneficial                               | Positive relationships are everywhere and commonplace among the way that students, teachers, and parents interact and support the student as learner.  |

The Relationship Framework first helps teachers understand that there are degrees of relationships. When they think about their relationships with students, teachers can use the Framework to apply a qualitative measure to the relationships they make. This qualitative measure helps teachers reflect on their current relationships and allows them to decide if they wish to make changes to improve in this area.

When relationships are categorized as a simple dichotomy of good or bad, teachers are not likely to reflect on their practices or make self-directed changes. If relationships are good, there is no need for change. If relationships are “poor,” it is easier to become defensive, blame the other party, or accept things for the way they are. But, when a specific framework is used for describing relationships, there is a different effect on teachers. Even if relationships are poor, there are at least some positive aspects on which to build. This makes teachers less defensive.

At the other end of the scale, relationships categorized as generally “good” usually are never as good as they could be. There is the potential for growth and further improvement. This motivates even the best teachers to continue to work on improving relationships and strive to reach higher levels. In this scenario, all teachers need to work on improving relationships regardless of the current level of success.

The various levels of the Relationship Framework help to identify the changes that need to be made to improve relationships. If a teacher observes that a student is apathetic, uninvolved, or isolated, the first

step is to engage in interventions by getting to know the student and facilitating activities among peers to expand what they know about one another. Just because students “hang out” together does not mean that they really know much about each other. Sometimes a student in a group can be just as isolated as one who sits alone in a school cafeteria.

Once teachers make relationships important, they can begin to reflect on current practices and discuss among themselves, administrators, and students how to improve them. Relationships are not simply good or bad; they exist on a continuum. Furthermore, relationships can change over time.

Many school improvement agendas focus exclusively on a new instructional strategy or curriculum, but the work to bring all students to high achievement levels is more complex than that. It involves establishing the right culture to grow the minds of students and to enrich the involvement and innovation of school leaders and staff.

For example, reaching out to one student at a time is the underlying principle at the Metropolitan Regional Career and Technical Center (The Met) in Providence, Rhode Island. Every student’s individual learning plan is a personal and academic summary of interests, strengths, and needs. This personalized curriculum, along with a strong coaching model, provides the impetus for high engagement and achievement.

There are no teachers at The Met, only “advisors,” who meet with students daily and follow their assigned cohorts over four years of high school. The advisor redefines the role of teacher into something much closer to a personal trainer or mentor. A personal learning plan for each student is developed by a learning team, which consists of the student, advisor, parent/guardian, and internship mentor. Student work is in the form of individual projects, which grow out of personal interests and the needs of mentors and internship sites. Unlike traditional schoolwork, the work done by Met students results in real products or consequences that matter to a larger audience in the Providence community.

### *Relationship Surveys*

Educators must not underestimate the sheer power of relationships in making schools more effective. Do the students consider school to be a good place to be? Do they have a sense of belonging? Do they feel at least a few adults are interested in their success and well-being? Do they feel safe? Do they feel recognized as individuals?

To gain insight into whether students perceive their schools as places in which they are known, supported, challenged, and inspired, the International Center has developed several surveys that align with the Relationship Framework. Answers are given on a five-point scale, from “strongly disagree” to “agree.” Sample survey statements include:

- Most of my teachers know my name.
- Most of my teachers know who my friends are.
- My teachers know my parents.
- I feel like I belong.
- Teachers help me catch up if I am behind.
- I feel that I belong (I am accepted and liked) at school.
- Teachers pay attention to all students, not just to the top students.

These and other relationship-focused surveys and research studies indicate that many students are disengaged in the learning process. The following observations can be made about the perceptions of students and the directions that all schools need to take to increase engagement among our young people.

- A large percentage of students find school learning experiences dull and uninspiring.
- Students will put forth their best effort only if the work is meaningful and relevant.
- Students indicate they would work harder in school if they could take courses related to the kinds of jobs they want after school.
- Students do not put forth their best effort if they do not feel a positive relationship with the teacher.
- Many students feel that their teachers do not respect them or care about their problems or feelings.

Developing learning relationships can be a data-driven decision by using the Relationship Framework and surveys that match this framework. Collecting data from staff, students, and parents will help to assess where a district is in regard to the level of relationships. Schools can then celebrate the current level of success and begin to examine changes in behaviors, procedures, and programs to make a difference in learning relationships.

### **The *Where* of Change: Begin with the End in Mind**

Knowing that students need a rigorous and relevant curriculum taught in a climate of positive relationships is an important step in school reform. Many educators know the importance of rigor, relevance, and relationships in an ideal learning environment, but they need more specific direction. They wonder: Where do we start? Where are we now? Where do we want to go? All these questions need to be defined in concrete quantifiable terms.

The answer to the question “Where?” is to know where you want end up as a result. Without a destination in mind, one road is as good as another. Any change can be considered. Schools need to know where they are going before they try to get there. While this may seem like common sense, most schools do not begin with a clear picture of what their desired student results are. Instead, they jump into changes and solutions because that seems like the thing to do — be proactive, make a change, adopt a practice that is working somewhere else. Schools do need to change, but changing too quickly or attempting to make changes without a clear destination will not be effective.

Where to begin change is not with best practices, but with the school clearly focused on the desired results of schooling. By having clear comprehensive indicators of student learning, schools are better prepared to select, adapt, and implement best practices that will make a difference in student learning.

### **A Narrow Focus**

Schools operated for a long time independent of formal and quantitative accountability systems. Since 2002, stronger accountability measures have been mandated, but they focus only on a few aspects of schools – English language arts, mathematics, and science. This seems like the right thing to do. Who can argue with making sure that students acquire these basic skills? However, the impact on schools has been to make significant changes just to raise a test score. Practices such as eliminating recess or physical education and reducing instruction in the arts and technical courses have occurred to the detriment of students. Schools need to be cautious in making changes when the measures of success are defined so narrowly.

The problem is that many schools have abdicated responsibility for the designation of accountability measures to federal/state mandates. In doing so, they have lost sight of their wider values, broader missions, and greater responsibilities to students, parents, and other education stakeholders. Schools need to be more proactive in designing their own comprehensive set of measures to determine education effectiveness.

Educators today feel conflicted about accountability measures that are limited in scope, yet powerful in consequences. As a result, schools feel like they are driving a car down the highway only looking out the right side window. They are forced to pay attention to one aspect when they truly believe that they should be looking in all directions. Educators are tense in this dilemma of limited measures of accountability as if they were waiting for a collision to happen. Stepping back and redefining learning measures in a more comprehensive manner, including but not limited to state tests, will enable educators to embrace goal-setting and accountability measures that are more consistent with what they believe about teaching and learning.

Following are several questions that will help focus on the need for revised accountability measures.

- How do you identify school success?
- How do you describe an “educated student” in your school?
- Does your school community have a way to measure success? Is it the same way others measure your success?
- Are state tests the only aspect of education that matters? If not, what else does?
- Do you want to put state tests in their proper perspective?
- Does being judged only on state tests narrow your focus of work?
- How do you really measure whether school improvements are working?
- How do you focus your school community on the needs of students?
- Do current measures of student learning fail to identify some of your “best” students?

### **Learning Criteria to Support 21<sup>st</sup> Century Learners**

The Learning Criteria to Support 21<sup>st</sup> Century Learners™ is one tool that supports school improvement processes through a stepwise data collection and analysis process. This is an essential and unique aspect of the International Center’s model for change, clarifying where schools want to be heading and establishing specific measures to set goals and monitor progress. In the hands of a thoughtful and broad-based school leadership team, the Learning Criteria helps schools clarify their missions, prioritize plans and interventions to address challenges, and then critically review school performance against those plans on an ongoing fashion. Further, these analyses provide critical rationales for establishing goals and developing action plans. Most importantly, the data generated by the Learning Criteria reflects the needs of learners in ways that less complex and more traditional measures overlook. The Learning Criteria is designed to provide a robust, comprehensive, and detailed portrait of school performance that clearly maps out a route for school improvement efforts.

The Learning Criteria is arranged in four data dimensions that school leaders can use to determine the success of their high schools in preparing students for current assessments and future roles and responsibilities. A school should have data indicators in all of the categories, and at least one indicator in each category should apply to the entire student population.

**Core Academic Learning** is achievement in the core subjects of English language arts, math and science and others identified by the school. Indicators include: percentage of students meeting proficiency level on state tests and percentage of students graduating high school in four years.

**Stretch Learning** is the demonstration of rigorous and relevant learning beyond minimum requirements (participation and achievement in higher level courses, specialized courses, etc.). Indicators include interdisciplinary work and projects, such as a senior exhibition, and average number of college credits earned by graduation through dual enrollment. Stretch learning may be the most difficult of the Learning Criteria because it compels schools to define how they are stimulating and stretching each student and not

just the most academically gifted. It challenges a school to find data to validate the claim that “all students will ...” If schools are truly stretching them, students also will spend most of their time in Quadrants C and D of the Rigor/Relevance Framework .

**Learner Engagement** is extent to which all learners (1) are motivated and committed to learning, (2) have a sense of belonging and accomplishment, and (3) have relationships with adults, peers, and parents that support learning. Indicators include attendance rate and participation rates in extracurricular activities. Students need to be engaged before they can apply higher order, creative thinking skills. They learn most effectively when the teacher makes sense and meaning of the curriculum material being taught. This can only happen if the teacher has created a safe learning environment that encourages students to meet challenges and apply high rigor skills to real-world, unpredictable situations inside and outside of school.

**Personal Skill Development** is (1) measures of personal, social, service, and leadership skills and (2) demonstrations of positive behaviors and attitudes. Indicators include service learning participation and teamwork. Think about a son or daughter’s new friend. Are you more concerned about the friend’s grades or his or her character qualities? Personal skill development gets to the heart of what makes a citizen, friend, or community member. What are schools doing to promote these qualities? Are they making leadership opportunities available for all students? Are they creating a curriculum that teaches these skills and making them graduation requirements?

The specific data indicators used will vary among schools based upon state requirements and school philosophy, focus, and curriculum. However, to identify success and maximize their usefulness, data collected through the Learning Criteria tool must be examined from the following perspectives:

- School Performance – Expressed in objective terms
- Sustained – Trend data to show improvement or maintenance at high levels for 3-5 years
- Disaggregated – Comparisons in achievement among all subgroups
- Benchmarked – Compared to similar schools, schools in state, school in nation, or accepted norms from national/state surveys, reports

The identification of data indicators for the Learning Criteria is the start of a process. It is meant to be dynamic and continuous. Initially, few schools will have all of the data necessary to complete the Learning Criteria fully. It will take time and several steps to move through the process.

Because data-driven decision making, effective leadership, clear learning expectations, and effective instruction have all been identified a critical factors to be examined, the Learning Criteria to Support 21<sup>st</sup> Century Learners has proved to be a valuable tool and guideline in translating beliefs and vision into actions through goal setting and measuring benchmarks. Data-driven decision making, effective leadership, clear learning expectations, and effective instruction have all been identified as critical factors to be examined. Additionally, it is apparent that structures and programs in effective schools are driven by instructional needs, including systems to monitor and support student progress; and that, because all improvement plans must adapt to changes and needs, goals and processes must be adjusted over time.

## **Principal’s Diploma**

The Learning Criteria also can serve as a useful tool to help students set goals for themselves. To this end, the International Center is in the process of creating a Principal’s Diploma to encourage students to measure themselves against various indicators in each of the four dimensions. Students would be awarded the Principal’s Diploma if they receive either 75 points or more in all four dimensions or an overall 80-

point average or above. Schools will earn a School of Excellence status if at least 70% of the students receive the Principal's Diploma. Points are distributed across a scale that ranges from 5-15 points.

Here are samples of student indicators in each of the four criteria:

### 1. Core Academics

- Achievement on state tests
- Grade-point average
- Full schedule of English, math, science, and social studies

### 2. Stretch Learning

- Advanced Placement results
- International Baccalaureate participation
- Three or more years in a second-language course

### 3. Learner Engagement

- On schedule to graduate with cohort group
- Career planning activities
- Service learning activities

### 4. Personal Skill Development

- Internships/shadowing activities
- Complete a financial aid form
- Do a research project that demonstrates authentic writing, listening, and global awareness skills.

## The *How* of Change: Components of School Excellence

Schools that create an environment in which everyone understands the *why*, agrees with the *what*, and focuses on the *where* have an advantage and are well on their way to implementing successful change. However, implementing the *how* for many educators is still a challenge.

The following Components of School Excellence identify the more specific actions that schools must take to achieve rigor, relevance, and relationships. The eight components are not sequential, but all must be addressed if a school is to prepare its students adequately for their future.

1. **Embrace a Common Vision and Goals — Rigor, Relevance, and Relationships for ALL Students.** Schools, like any organization that seeks to improve, must have a common vision shared by all. Everyone must be committed to shared goals to measure success, and staff must have the same perspective as to what is important in the organization. Change will not occur in schools unless teachers, parents, students, and the community understand that continuous improvement is needed. The goal is to create more pressure for than resistance to change.

The International Center has developed a wide variety of strategies and resources that can assist schools in creating a shared vision of school improvement and then maintaining commitment to an ongoing, comprehensive school improvement program. Suggested strategies/outcomes include the following:

- Leadership, staff, students, and stakeholders can articulate the reasons for change and can describe the vision of school improvement.

- Through processes, structures, attitudes, and actions, leadership and staff exhibit a culture of high expectations that embraces rigor, relevance, and relationships for all students.
- Staff and stakeholders take ownership of an improvement plan with clear goals and objectives.
- Leadership is focused on sustaining momentum for change and on reducing resistance to change.

2. **Inform Decisions Through Data Systems.** Whole school reform is a continuous process guided by a well-developed data structure based on multiple measures of student learning. Highly successful schools use quality data to make laser-like decisions about curriculum, instruction, and assessment. Using data, they validate areas of strengths and needs accurately, identify priority issues, and make adjustments effectively in order to meet the needs of all students. They share key data appropriately with stakeholders.

The Learning Criteria to Support 21<sup>st</sup> Century Learners is designed to help schools measure “success beyond the test” and to support a culture that believes state testing and AYP are essential but not adequate in meeting the needs of all learners. Suggested strategies/outcomes include:

- Education values and shared vision of leadership and staff are translated into measurable learning goals and criteria.
- Data-driven decisions are used as the basis of strategic planning; day-to-day activities are connected with overarching goals.
- Current data is available and used to make decisions, set goals, and measure progress.
- School success is based on multiple measures of student achievement using the four dimensions of the Learning Criteria:
  - Core Academic Learning
  - Stretch Learning
  - Learner Engagement
  - Personal Skill Development
- The school uses the Learning Criteria as a roadmap to guide and assess its reform process.

3. **Empower Leadership Teams to Take Action and Innovate.** Schools that will be most successful in the 21<sup>st</sup> century will be led by individuals who possess skills and attitudes to take action rather than defend the status quo. Leadership does not reside in a single position, but reflects the attributes, skills, and attitudes of the many staff members who take action and improve through effective learning communities.

School administrators lead systems and institutions that are inherently resistant to change. Leaders in the highest performing districts and schools cultivate relationships, build broad-based momentum for school improvement efforts, and create a shared vision regarding what to change and how changes will be made. Meaningful, sustained reform is facilitated when leadership guides teachers, staff, parents, and community stakeholders to embrace a shared vision of school improvement. The International Center assists schools in the development of leaders – veteran incumbents and prospective future leaders – who can communicate and build support for school reinvention, plan and guide its implementation, and maintain a commitment to continuous improvement. Suggested strategies/outcomes include the following.

- The effectiveness of school and district leadership is apparent to all.
- Leadership is distributed among staff who are knowledgeable of change management principles and processes.
- Current leaders are retained and energized; new and prospective leadership talent is identified and developed.

- Capacity and momentum maintain the vision of continuous improvement and sustain a culture of rigor, relevance, and relationships.

4. **Clarify Student Learning Expectations.** Inconsistent state standards, tests, and community expectations create a wide-ranging and jumbled assortment of curricula, instructional practices, and classroom materials along with varying expectations for rigor within and across grade levels. When districts take steps to clarify what students are expected to learn, schools meet with success in improving student achievement.

The school curriculum has expanded to the point of being unwieldy in terms of scope and breadth. As a consequence, district/school leadership and teachers need to be aware of and understand their state standards, as well as how their curriculum maps to the standards. They must have access to reliable data on state assessments so they can review test blueprints to determine which standards are priorities, then use that information to set curriculum priorities.

Successful schools recognize that state standards and assessments must be viewed as baseline for all students. Students need additional skills and knowledge for success after graduation. These schools have implemented coherent, prioritized curriculums with mutually reinforcing components that address what students need to know and be able to do to be successful in life and the knowledge they need to be successful on high stakes tests. Suggested strategies/outcomes include:

- School culture and focus demonstrate clear evidence of emphasis on standards.
- Clearly articulated, scaffolded, and prioritized curricula are aligned by subject to state, local, and industry standards.
- Learning expectations and student proficiency levels are clearly defined with:
  - prioritized, locally-developed skills and knowledge outcomes, curriculum maps, and assessments
  - crosswalks of the arts and career and technical education to academic subjects
  - instructional improvement plans
  - teacher instructional plans

5. **Adopt Effective Instructional Practices.** Instructional practices must have a wide range of strategies and tools to meet the needs of diverse learners in all disciplines and grade levels. Success in achieving state standards results not from teaching using routine and proscriptive methods, but from teachers selecting instructional practices to meet the needs of all students.

Helping individual students to attain the highest levels of academic rigor should be the goal of all educators. This notion needs to be balanced, however, with the recognition that relevance makes rigor possible. Moreover, relationships nurture relevance and rigor. Trusting and respectful relationships among students, teachers, and staff are an important factor in moving all students to high levels.

Instruction must be adjusted to serve the needs of individual learners, be based on the high expectations set by a caring teacher, and be informed by brain-based research. Successful instructional practices integrate reading and writing strategies and are differentiated and adapted to meet the needs of diverse classrooms that include students with disabilities, students whose second language is English, and students who are disengaged. Suggested strategies/outcomes include:

- Teachers are conversant with the Rigor/Relevance Framework and design instruction accordingly.
- Differentiated and personalized instruction built on positive relationships is evident in all classrooms.

- Instructional needs of students with disabilities, English language learners, and disengaged students are accommodated.
- All teachers address literacy and mathematical proficiency and personalize learning.

6. **Address Organizational Structures.** Organizational structure should be determined by instructional needs. Only after a comprehensive review of instructional practices should schools begin to address such organizational changes as school schedules, use of time, unique learning opportunities, school calendars, and physical structure.

By focusing first on effective instructional strategies and practices, highly successful schools design safe, secure, and supportive learning environments that enhance relationships and personalize instruction for all students through structures such as small learning communities, career and technical education, supportive transitional programs, and community partnerships that provide work-based experiences and meaningful internships. These structures facilitate staff collaboration, connect students with caring adults, and nurture learning environments designed to provide students with rigorous coursework, relevant experiences, and meaningful relationships with teachers who will help them attain their goals and aspirations. Suggested strategies/outcomes include:

- The school is results-driven and focused on effective instruction.
- Programs, structures, and the physical environment reflect a concern for and reinforce relationships, address student needs, and offer a safe, secure, nurturing, and engaging environment for learning.
- Instructional goals determine organizational issues and structures. Organizational issues and structures are adapted to support the learning needs of all students, to forge staff collaboration, and to provide a personalized environment that supports relationships and encourages achievement.
- Time, use of space, “environmentals,” the physical facility, and resources are aligned with student learning and engagement goals.

7. **Monitor Progress/Improve Support Systems.** Highly successful schools recognize the need to monitor student progress on a regular basis. They use formative assessments in an organized, deliberate, and ongoing fashion to monitor student progress. Further, they use this data immediately to adjust instructional practices and intervene to meet student needs.

Even though many ongoing school processes and practices were originally devised to classify students by ability group, today’s education leaders are challenged with providing meaningful learning experiences for ALL students. Educators need to ensure that all students graduate from high school as college-, career- and life-ready young adults. To accomplish that goal, student progress and attainment need to be constantly measured and the resulting data then used to help each student achieve proficiency.

Because students arrive at school at various points along the academic achievement and needs spectrum, schools must provide meaningful support systems that identify and then help close gaps in student learning. Furthermore, since effective learning is nurtured by relationships, support systems need to be built upon strong relationships. Suggested strategies/outcomes include:

- Achievement, learning, engagement, and progress data is monitored and analyzed regularly for all students.
- Students with special needs are identified and provided with services to drive their success and achievement.
- Multiple pathways to achievement are offered.

- Academic intervention strategies are available, understood by everyone, and fully and effectively utilized.

8. **Refine the Process on an Ongoing Basis.** High-performing schools realize that success is a continuing and ever-changing course of action. This component, in fact, should reinvigorate the process and cause school leaders to look at new and emerging challenges and explore potential solutions and successful practices from around the country.

Student needs, community demographics, state requirements, and college and work-ready skills are continually changing. Successful schools utilize a planning process that continually monitors and reflects on student learning and performance. Suggested strategies/outcomes include:

- Goals based on the Learning Criteria to Support 21<sup>st</sup> Century Learners are frequently monitored and measured against the school improvement plan.
- The process encompasses continuous review and refinement of the school improvement process, as well as the monitoring of national trends, local needs, successful models, and best practices.

## **Needs Assessment and Strategic Planning**

The International Center has developed a needs assessment that incorporates rubrics and other tools to measure the gaps in each of the Components of School Excellence. Information for the needs assessment is gathered through a series of classroom observations, interviews, and surveys that are compiled in a report. The school and International Center then work together to develop an individualized strategic action plan.

The uniqueness of each school underlines the necessity of a customized needs assessment, focused heavily on instructional-related issues, as the first step in the school improvement process. The purpose of a needs assessment is to bring administrators and teachers together as a team to identify the school's strengths and weaknesses and to make decisions on how to bring about improvements in the classroom and in the school as a whole.

Essential to the strategic plan is a professional development program for teachers to help sharpen their instructional skills for 21<sup>st</sup> century learners, deliver instruction that is both rigorous and relevant, and with some teachers, strengthen their skills and knowledge in their own subject matter area.

In some cases, districts will need to look at a plan for curriculum development. Quite often, curriculum is now simply based upon textbooks in too many classrooms. This is not true in the high-performing schools. As a school district looks to address curriculum development, it may consider reviewing some of the outstanding national models created by Kaplan K12 that have been found to be successful in the nation's highest performing schools. Also essential to the strategic planning process will be a communication plan, which must address the needs of the school board, faculty, students, parents, general public, and the media.

## **Conclusion**

A quality education prepares students to enter the global economy with the ability to apply what they learned in school to situations that they cannot foresee before graduating. As educators decide how to respond to the ever-changing world, they must understand that society will not stand still while they think about how to address our challenges. So what are schools to do? The International Center believes that we as educators need to take a deep breath and one step back and engage the general community, parents, and

other educators in a careful examination of what we hope to prepare our graduates and collectively our nation for in the 21<sup>st</sup> century. The school improvement process approach that the International Center for Leadership in Education has advocated and has helped to institute is based on three questions:

- *Why?* This first question is key to identifying the issues so we can build consensus around solutions.
- *What?* The second question allows us to suggest a plan based on data, research-based models, and successful practices.
- *How?* This final question addresses solutions by looking at proven and reliable models.

As we go through this process, we need to have a clear eye toward the future while not forgetting about traditions and history. This entire process will require a systematic approach that begins with a focus on preparing students for their future, not our past.

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