

Bronx Regional High School

FINAL REPORT



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Introduction

About This Report

This final report is the result of an external school curriculum audit (ESCA) of Bronx Regional High School conducted by Learning Point Associates, an affiliate of American Institutes for Research. This audit was conducted in response to the school being designated as in corrective action under the New York State Education Department differentiated accountability plan, pursuant to the accountability requirements of the Elementary and Secondary Education Act, as reauthorized by the No Child Left Behind Act. The utilized ESCA process was developed for and carried out under the auspices of the New York City Department of Education (NYCDOE) Office of School Development, within the Division of Portfolio Planning.

About Bronx Regional High School

Located in the South Bronx, Bronx Regional High School (X480) is a high school with 361 students from traditional Grades 10–12; the school population consists of 55 percent Hispanic, 43 percent black, 1 percent white, and 1 percent Asian students.¹ Thirty-eight percent of students are boys, and 62 percent are girls; the student body includes 9 percent English language learners (ELLs) and 9 percent special education students.² The average attendance rate for the 2008–09 school year was 71 percent, with 80 percent of the student population eligible for free lunch.³

Bronx Regional High School is an ungraded transfer school, serving a population of students who enter the school with a history of academic failure and who tend to be over-age and under-credited.⁴ Given its role as one of the city's transfer schools, the school's administration considers all of its students at risk and makes an effort to foster a supportive environment that addresses individual academic and social needs. The school strives to implement an educational approach that incorporates New York state standards into a range of flexible course offerings designed to meet the wide array of student needs.

According to the 2009–10 New York State Accountability Report, Bronx Regional High is in Restructuring Year 1 for English language arts (ELA).⁵ According to the report, Bronx Regional High School did not make adequate yearly progress in English language arts in the categories of all students, Hispanic or Latino students, and economically disadvantaged students.⁶ Over the past two years, the school has implemented a number of academic and social interventions designed to bolster academic achievement. Examples include a rigorous intake process during which the principal makes a clear effort to communicate the school's

¹ <https://www.nystart.gov/publicweb-rc/2010/91/AOR-2010-321200011480.pdf>, pages 2–3, accessed on June 29, 2011.

² <http://schools.nyc.gov/SchoolPortals/12/X480/AboutUs/Statistics/register.htm>, accessed on June 29, 2011.

³ <https://www.nystart.gov/publicweb-rc/2010/91/AOR-2010-321200011480.pdf>, page 3, accessed on June 29, 2011.

⁴ http://schools.nyc.gov/documents/oaosi/cep/2010-11/cep_X480.pdf, page 6, accessed on June 29, 2011.

⁵ <https://www.nystart.gov/publicweb-rc/2010/91/AOR-2010-321200011480.pdf>, page 37, accessed on June 29, 2011.

⁶ <https://www.nystart.gov/publicweb-rc/2010/91/AOR-2010-321200011480.pdf>, page 10, accessed on June 29, 2011.

expectations and requirements to parents and students to ensure that students are capable of meeting academic and behavioral expectations. Students who have accumulated fewer than 30 credits prior to entering the school are assigned to an additional class called “family group,” which is designed to facilitate the students’ transition during the first six months. Additional supports include block class scheduling and opportunities for credit recovery via PM school and NovaNet.

Audit Process at Bronx Regional High School

The ESCA approach utilized at the high school level examines six topic areas: student engagement, academic interventions and supports, support for incoming students, classroom instruction, professional development, and courses and extracurricular. Data were collected at the school level through teacher surveys, administrator interviews, classroom observations, and an analysis of documents submitted by Bronx Regional High School. From these data, Learning Point Associates prepared a series of reports for the school’s use.

These reports were presented to the school during a co-interpretationSM meeting on April 15, 2011. During this meeting, 10 stakeholders from the Bronx Regional community read the reports. Through a facilitated and collaborative group process, they identified individual findings, then developed and prioritized key findings that emerged from information in the reports.

The remainder of this report presents the key findings that emerged from the co-interpretation process and the actionable recommendations that Learning Point Associates developed in response. Please note that there is not necessarily a one-to-one connection between key findings and recommendations; rather, the key findings are considered as a group, and the recommended strategies are those that we believe are most likely to have the greatest positive impact on student performance at Bronx Regional High School.

Key Findings

After considerable thought and discussion, co-interpretation participants determined a set of key findings. These key findings are detailed in this section.

Critical Key Findings

CRITICAL KEY FINDING 1:

According to observation data, ratings for adolescent perspectives ranged from low to high. This trend shows inconsistent evidence of teachers presenting relevant material or encouraging student autonomy.

Critical Key Finding 1 summarizes three related findings yielded from observation data. Based on these findings, the participants in the Bronx Regional co-interpretation determined that elements related to the indicator were present to an inconsistent degree, primarily due to a lack of evidence around efforts to connect classroom material to adolescent life or support student autonomy. Participants noted that observation data had evidenced classroom structures that were generally relaxed and provided students with opportunities to engage in peer sharing as well as expressing opinions and ideas. However, the discussion also revealed that efforts to relate classroom material to adolescent life or to support student autonomy and leadership were less prevalent.

CRITICAL KEY FINDING 2:

Interviews, a review of documents, and data collected from teacher surveys showed strong internal teacher collaboration; however, there are limited opportunities for teachers to work with teachers from other schools.

Co-interpretation participants developed Critical Key Finding 2 based on findings related to teacher collaboration and faculty engagement. Document review, interview, and survey data provided strong evidence that faculty engagement is mixed at Bronx Regional High School, particularly with regard to opportunities for outside collaboration with faculty from other schools. The vast majority of surveyed teachers reported that they were likely to share their concerns with either a colleague (85 percent) or an administrator (77 percent). The majority of surveyed teachers also reported agreeing or strongly agreeing that collaboration takes place in a number of ways, with departmental meetings taking place at least once a month. However, almost half (46 percent) of teachers reported that they were not given opportunities to work with teachers from other schools. In addition, evidence from interviews indicated that mixed levels of engagement during faculty activities can present a challenge to effective collaboration.

CRITICAL KEY FINDING 3:

Survey, document review, and interview data indicate that academic supports and services are available for students based on their needs.

Evidence from three findings was used to develop Critical Key Finding 3, including data from document reviews, interviews, and survey data. This key finding was based on inconsistent data related to student access to timely, effective, and sustained academic supports and interventions. Document review and interview data indicate that academic supports

and interventions (such as credit recovery through PM school and outside academic interventions) are available to students, but there are no formal interventions beyond the availability of teachers to provide additional support and the 90-minute ELA and mathematics instructional blocks. The vast majority (77 percent) of surveyed teachers reported that students receive services and supports that are effective and provided for the duration of each student's need. However, a small number of teachers (15 percent) also reported that it is minimally likely that the school will systematically identify the types of academic supports that are needed by a student.

CRITICAL KEY FINDING 4:

According to interviews and teacher surveys, internal and external professional development opportunities are meaningful in addressing the next steps from the Quality Review Report findings.

Participants developed this key finding based on document review, interview, and survey data, which provided strong evidence of teachers participating in professional learning communities with support from the administration. Slightly over half (54 percent) of surveyed teachers reported meeting as often as 1–2 times a week to collaborate on instruction and student learning. Survey data also indicated that teachers found professional development in the following areas to be moderately to very helpful: formative assessment; using technology; teaching students with disabilities, ELLs, and students several years below grade level; developing standards-based lessons; and collaborative learning. Although these findings indicated that teachers are engaging in professional development and collaborative activities, there also is evidence that teachers have less time to participate in departmental meetings in order to discuss issues that are subject-specific in terms of curriculum and instruction.

Positive Key Findings

POSITIVE KEY FINDING 1:

Document review and interview data show that offered courses and sequences are based on student academic needs, graduation requirements, and students' overall time spent in high school.

This finding was based on interview and document review data, indicating that courses and curriculum at Bronx Regional are designed to address the academic needs of students who have not succeed in a traditional high school and thus may need extra support in order to successfully pass the Regents exam and graduate. These supports include the implementation of block scheduling to allow a greater focus on ELA, science, and mathematics, with fewer opportunities for elective courses or extracurricular activities.

POSITIVE KEY FINDING 2:

Teacher surveys indicate that teachers have access to student data and information.

Positive Key Finding 2 was developed based on teacher survey data and indicated that the vast majority of surveyed teachers reported that they have access to student data, such as the number of course failures (93 percent) and grade point average (85 percent).

Teacher survey data also revealed that teachers regularly assess student performance using classroom or teacher-created assessments either daily or almost daily (46 percent) or at least 1 to 2 times a week (39 percent).

Additional Key Finding

Additional key findings were identified by co-interpretation participants but were not prioritized by the group for action planning. The auditors found the following key finding worthy of consideration in developing recommendations.

ADDITIONAL KEY FINDING 1:

Classroom observation data show student engagement in higher-order thinking across high and middle ranges. However, in the low range, there was no evidence of students' engagement or higher-order thinking.

Observation data indicated that evidence of higher-order thinking was observed across the mid and high ranges, with the vast majority of classrooms (75 percent) receiving ratings in the mid range, showing that only some evidence of students engaging in higher-order thinking was noted in these classrooms. Similarly, most classrooms fell in the mid range for student engagement (60 percent), which evidenced that a number of students were disengaged from instruction or classroom activities for some of the time during the observation. However, a number of classrooms (20 percent) received ratings in the low range for analysis and problem solving, indicating that little evidence of higher-order thinking was present during classroom observations.

Recommendations

Overview of Recommendations

During the Bronx Regional co-interpretation, school staff and faculty identified the following issues as priority areas for improvement: relevant and autonomy-supportive instructional strategies, a lack of intervisitation opportunities with colleagues from other schools, and the provision of academic services based on student needs. Instructional issues garnered much discussion at the co-interpretation; although a key finding was developed by the participants acknowledging a lack of evidence related to higher-order thinking in the classroom according to the observation data, it was not as highly prioritized. A number of participants expressed surprise that such an important key finding did not receive more votes to identify encouraging higher-order thinking as a priority area at Bronx Regional High School. Additional discussions centered on the inherent difficulties of addressing these priority areas for improvement, given the challenges of the student population at Bronx Regional and the limited time available to staff for professional development and intradepartmental professional learning and collaboration opportunities. Discussions also revealed inconsistencies with regard to the number of targeted formal interventions currently in place for students at risk for academic failure.

Although interview data had identified strategies utilized by the school, questions relating to the current level of actual implementation were noted during the co-interpretation. The audit process confirmed that the following academic intervention services were offered during the 2010–11 school year: afterschool and online credit recovery opportunities, PM school, and block scheduling for mathematics. Thus, auditors recommend offering additional formal targeted academic intervention strategies to supplement existing approaches to academic intervention. The auditors believe that implementation of integrated strategies related to internal and external subject-specific professional learning and collaboration, more formal targeted academic intervention services, and autonomy-supportive instruction that is rigorous and relevant will help to address multiple areas for improvement at Bronx Regional.

THE FOUR RECOMMENDATIONS

With these issues in mind, Learning Point Associates auditors developed the following four recommendations:

1. Develop and implement specific strategies for incorporating appropriate student voice, choice, and opportunities for autonomy and leadership in the classroom.
2. Continue to develop, refine, and implement a professional development plan that is aligned with school goals and focused on subject-area content. Professional learning opportunities should be aligned with the following areas identified during the co-interpretation: structured, subject-specific intervisitation collaborations with other schools; and instructional strategies that address and promote the adolescent perspective, instructional rigor and relevance, and student autonomy.

3. Develop and implement a schoolwide system to identify students, specific learning needs using assessment data, provide formal multitiered academic interventions, and employ ongoing progress monitoring to address student needs.
4. Implement instructional strategies that increase opportunities for higher-order thinking, analysis and problem solving, and deeper content understanding.

These four recommendations are discussed on the following pages. Each recommendation provides a review of research, online resources for additional information, specific actions that the school may wish to take during its implementation process, and examples of real-life schools that have successfully implemented strategies. All works cited, as well as suggestions for further reading, appear in the References section at the end of this report.

Please note that the order in which these recommendations are presented does not reflect a ranking or prioritization of the recommendations.

Recommendation 1: Student Voice, Choice, Autonomy, and Leadership

Develop and implement specific strategies for incorporating appropriate student voice, choice, and opportunities for autonomy and leadership in the classroom.

LINK TO RESEARCH

Empirical research has demonstrated that supporting student choice, autonomy, and leadership in the classroom can train students to regulate their own learning and deepen their cognitive process to improve academic achievement. Efforts to foster supportive autonomy consist of establishing a link between a student's classroom behavior and the resources that motivate the student to succeed, such as personal interests, goals, and values (Reeve, 2010). This approach inherently involves students in their own learning process by creating a direct link between their personal motivations and classroom activities.

Autonomy-supportive instructional strategies have been shown to improve student engagement, conceptual understanding, academic achievement, and persistence in the classroom (Young, 2005). The goal of these strategies is to encourage students to engage in self-regulated learning, which involves students interpreting learning tasks, determining goals, and implementing strategies to meet goals (Young, 2005). Creating an autonomy-supportive classroom environment requires teachers to incorporate students' preferences, choices, curiosity, and challenges into lessons (Reeve, Jang, Carrell, Barch, & Jeon, 2004). Additional approaches include allocating time in a way that allows students to work in their own way, scaffolding student learning, engaging in feedback loops with students, and offering praise and encouragement to students (Young, 2005).

Enhancing student autonomy through autonomy-supportive strategies and lesson content that has relevance to adolescent lives allows students to align their inner motivational resources, classroom behavior, and academic achievement (Assor, Kaplan, & Roth, 2002; Stefanou, Perencevich, DiCintio, & Turner, 2004; Young, 2005). This strategy encourages students to understand schoolwork in the context of their own interests and goals, which has the potential to help students to develop self-regulation skills and learning strategies to facilitate their academic and professional success.

IMPLEMENTATION CONSIDERATIONS

Adolescence represents a critical period during which youths struggle to take on new responsibilities and learn decision-making skills while concurrently establishing a sense of self and identity. This period also marks a stage where adolescents are learning to regulate their behavior and cognitive abilities, which can be facilitated by incorporating autonomy-supportive strategies in the classroom (Zimmer-Gembeck & Collins, 2003).

The key to developing and implementing an autonomy-supportive classroom is to become familiar with the strategies that either encourage or inhibit student voice, choice, autonomy, and leadership. Table 1 provides an overview of the features and aspects that characterize an autonomy-supportive motivating instructional style versus a controlling motivating style.

QUICK LINKS: Online Sources for More Information

Collaborative for Academic,
Social and Emotional
Learning (Website)

<http://casel.org/>

Self Determination Theory
(Website)

<http://www.sustainengagement.com/>

Classroom Observation:
Student Autonomy
(Online video)

http://www1.teachertube.com/viewVideo.php?title=Classroom_Observation__Student_Autonomy&video_id=185325

Table 1. Defining Features of Two Types of Motivating Styles: Autonomy Supportive and Controlling

Autonomy-Supportive Motivating Style	Controlling Motivating Style
Definition:	Definition:
<i>A teaching style that involves understanding and valuing the student's perspective during instruction</i>	<i>A teaching style that involves a teacher-centered approach to developing a class agenda and encouraging student compliance with the agenda</i>
Key Features:	Key Features:
<ul style="list-style-type: none"> ■ Encourages a student's personal motivational resources ■ Incorporates noncontrolling instructional language ■ Promotes worth ■ Acknowledges and accepts negative expressions and attitude 	<ul style="list-style-type: none"> ■ Dependent on external motivational sources ■ Utilizes language that is more controlling and pressuring ■ Assertive
<small>Adapted from <i>Anatomy Support</i> by Johnmarshall Reeve (n.d.), available online at http://www.education.com/reference/article/autonomy-support/.</small>	

Specifically, teachers can take the following actions to promote student autonomy in the classroom:

1. Foster relevance.

Teachers should make an overt effort to incorporate their students' interests, values, and goals into the learning process by learning about student concerns through informal and classroom dialogue (Learning Point Associates, 2005). Examples include communicating with the students regarding their feedback about classroom tasks and trying to help students understand how a task contributes to their personal objectives (Assor et al., 2002). Research has indicated that students are more likely to be cognitively engaged and use higher-order thinking skills when they find the subject matter interesting (Young, 2005).

2. Make learning authentic.

Instructional practice should build upon students' foundational knowledge (i.e., background, ideas, skills, and attitudes), challenge students, and also connect content to value beyond the classroom (Donovan & Bransford, 2005; Newmann, Marks, & Gamoran, 1995). Teachers should give assignments that have public or personal value to students (such as oral history projects, or writing editorials for the local newspaper) and also are academically rigorous (Newmann et al., 1995).

3. Provide choice.

Teacher behavior should enable students to choose classroom activities and tasks that are consistent with their interests and goals. Providing students with the opportunity to understand how schoolwork can contribute to their personal goals increases their ability to work more autonomously (Assor et al., 2002). In addition, asking students for input on classroom activities allows teachers to become more aware of students' psychological needs and to incorporate those needs into the lesson (Reeve, 2010).

4. Promote independent thinking and permit student criticism.

Encouraging students to engage in independent thinking and criticizing lessons that they do not find interesting can provide teachers with opportunities to foster more in-depth conversations about classroom activities. These discussions may allow the teacher to make adjustments to lessons to increase student interest or engage in a dialogue with students about the importance of the task to make them value the assignment (Young, 2005). The overall goal of this strategy would be to increase the opportunities for student voice in the classroom and promote mutual communication between teachers and students regarding lesson content.

5. Be aware of how teacher behaviors can *inhibit* student voice, choice, leadership, and autonomy. Work to eliminate the following behaviors:

- **Micromanaging student work and behavior.** Teachers should avoid unnecessary intrusions related to how students approach their work. Such intrusions inhibit student expression. Students should have the opportunity to discover their natural working patterns in the context of classroom activities (Young, 2005).
- **Assigning tasks that lack relevance and interest to adolescents.** Students are less likely to be responsive to tasks that they do not find interesting or important. Thus, teachers should make an effort to communicate the importance of tasks that they assign and incorporate elements that are relevant to adolescent lives (Reeve, 2009; Young, 2005).
- **Forbidding student criticism and stifling independent thinking.** Teacher behavior that undermines student voice has the potential to inhibit students' ability to conduct self-regulated learning and self-expression. Inhibiting students' ability to express their opinions can be frustrating and interferes with their ability to make connections between classroom activities and their personal interests and goals.

Autonomy-Inducing and Autonomy-Suppressing Teacher Behaviors

Young (2005) describes the following teacher behaviors, which can either induce or suppress student autonomy.

Autonomy-Inducing Teacher Behaviors:

- Listening
- Integrating independent work sessions
- Facilitating peer-to-peer conversations
- Praising and encouraging evidence of improvement or mastery
- Scaffolding
- Creating a responsive environment that supports student questions and comments
- Incorporating student perspective and experiences

Autonomy-Suppressing Teacher Behaviors:

- Dominating learning materials
- Solving problems or answering questions before students have had a chance to work on them independently
- Directive rather than reciprocal feedback
- Interrupting student comments

Student-Generated Classroom Rules

One strategy for promoting student voice, choice, autonomy, and leadership in the classroom is to enable students to generate the rules of the classroom. Following are examples of two school districts that use student-generated classroom rules.

LINN BENTON LINCOLN EDUCATION SERVICE DISTRICT, EUGENE, OREGON

In 2007, the National Center for School Engagement held a contest titled “21 Ways to Engage Students in School,” which included a sampling of best practices designed to foster student leadership in schools, community-based groups, and public agencies. Linn Benton Lincoln Education Service District in Eugene, Oregon, had a winning strategy for creating student-generated classroom rules:

In Eugene, Oregon, students create a list of classroom rules to be followed. Each student signs off on the rules and is held accountable by fellow students. In addition, they developed their own “honor role,” in which students are recognized for doing their best, following directions, and not talking out more than 3 times a day. (National Center for School Engagement, 2007, p. 4)

MT. PLEASANT PUBLIC SCHOOLS, MT. PLEASANT, MICHIGAN

A teacher at Mt. Pleasant High School (see Ling, n.d.) developed a unit on creating student-generated classroom rules. The unit involves multiple examples of real-world relevance, including problem solving, democratic self-government, common good, collective rights, and public discourse.

Classroom Activities:

- Identifying students’ rights that have been recognized by the U.S. Supreme Court.
- Articulating the concept of jurisdiction in the context of classroom rules in a public school setting.
- Writing and prioritizing the most critical student rights and student behaviors that may threaten those rights
- Developing strategies for protecting these student rights.
- Voting on a single set of rules that are appropriate for a variety of classroom settings.
- Monitoring the implementation of the rules with regard to protecting student rights and making adjustment based on majority decisions.

Proposed Unit Assessments:

- **Classroom discussion:** The ability of students to articulate key concepts orally.
- **Group work:** Determining how well students are working in groups to develop a list of rights, identify problem behaviors and create classroom conduct rules.
- **Essay:** Topics could include the relationship between rights and rules in a society, identify the most (or least) important rules that protect individual rights, propose changes to the process for developing class rules.

Teaching Tips:

Teachers should expect to play a role in developing rules with students and may need to generate additional “Teacher rules” to maintain a supportive and productive working environment. However, note that any teacher-generated rules should be kept at a minimum to maintain student ownership over the lesson content.

Additional details about the specific lessons at Mt. Pleasant Public Schools are available through the Learning to Give website at <http://learningtogive.org/lessons/unit18/>.

Recommendation 2: Professional Learning and Collaboration

Continue to develop, refine, and implement a professional development plan that is aligned with school goals and focused on subject-area content. Professional learning opportunities should be aligned with the following areas identified during the co-interpretation: structured, subject-specific intervisitation collaborations with other schools; and instructional strategies that address and promote the adolescent perspective, instructional rigor and relevance, and student autonomy.

QUICK LINKS:

Online Sources for More Information

Classroom Observations (Webpage)

<https://knowledgebase.newvisions.org/CustomAOIIndividual.aspx?id=709>

High-Quality Professional Development for All Teachers: Effectively Allocating Resources (Publication)

<http://www.tqsource.org/publications/HighQualityProfessionalDevelopment.pdf>

Professional Development for Educators (Webpage)

<http://www.publicimpact.com/teachers-leaders/professional-development-for-educators>

LINK TO RESEARCH

Research indicates that professional development for teachers is most effective and boosts student achievement when it is embedded in teachers' daily work and sustained, as opposed to a one-time workshop model (National Staff Development Council, 2001; Steiner, 2004; Wei, Darling-Hammond, Andree, Richardson & Orphanos, 2009; Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). Effective professional development also provides teachers with opportunities for collaboration, coaching, and peer observation, which allows them to be actively involved in their own development and more frequently practice learned skills (The Center for Comprehensive School Reform and Improvement, 2006; Joyce & Showers, 2002). In addition, professional development is most effective when it is directly connected to teacher practice and focuses on content (National Staff Development Council, 2001; Wei et al., 2009; Yoon et al., 2007). Content areas should align with school improvement needs and goals to target improvement to those areas.

Schools can improve teacher practice and student achievement by refining the process by which professional development is offered; ensuring that the professional development is job embedded, sustained, and allows for active teacher participation; and focusing the development on teacher practice and content (Wei et al., 2009; Yoon et al., 2007).

IMPLEMENTATION CONSIDERATIONS

Creating a professional development plan that addresses both student learning and teacher learning can be a complex task. Professional learning activities should be designed with student achievement as both the impetus and outcome. School improvement goals should be directly related to a review of student achievement data. Subsequently, teacher learning activities should be directly related to the goal of improving student outcomes. At minimum, successful schoolwide professional development plans include the following sequential steps:

1. Analyze student data and/or conduct a needs assessment.

Review student learning data by using an item analysis of state test results, interim assessment results, school quality review, or ESCA report. Identify areas of low proficiency, slow learning progress, drops in proficiency between grades, and subgroup and gender differences.

2. Select goals for student learning.

Identify specific, measurable, achievable, relevant, and time-sensitive (SMART) learning goals for students.

3. Select professional development goals for teacher learning.

Identify specific and measurable teacher learning goals, directly related to student learning goals.

4. Select professional development activities to meet goals.

Determine what activities will best meet teachers' learning needs (e.g., workshops, coaching, collaborative inquiry, intervisitation). Consider available resources (time, money, materials) and a range of professional development activities, and match with the needs of adult learners.

5. Implement the professional development activities.

Ensure that teachers have time and resources (e.g., research, articles, video clips, coaches, opportunities to observe master teachers) for professional development. Provide teachers with clear expectations for integration into their pedagogical practice, structures and protocols for activities, and opportunities for reflection.

6. Evaluate the impact of professional development.

Develop an evaluation plan. Identify what to measure, how to measure it, and when to measure it. Create a frequent and ongoing schedule of evaluation.

7. Modify the professional development plan.

Determine the impact of the professional development activity. If the activity achieves or fails to achieve its desired results, modify the plan accordingly.

For practical applications, refer to the "Sample Professional Development Plan" on the following page.

Sample Professional Development Plan

Following is a sample professional development plan adapted from *Apply What You Know: Designing Effective Professional Development* (Steiner, 2009). It indicates the specific actions taken by the district, which show alignment to school goals and a focus on subject-area content.

Analysis of Data. Data analysis revealed a “significant drop in math proficiency between 4th and 5th grade.” Further review of test item analysis indicated that students did not demonstrate proficiency in fractions.

Student Learning Goals. The district determined the following goal for students: “At the end of the third quarter of fifth grade, 75% of all students will pass an end-of-unit test on fractions.”

Professional Development Goals for Teachers. The district determined the following goal for teachers: “At the end of the spring semester, all fifth grade teachers will demonstrate an improved ability to teach fractions as measured by their implementation of new instructional strategies and improved student learning.”

Professional Development Activities. The district determined the following professional development activities to meet its goals: “In the fall, before teachers begin the fractions unit, 5th grade math teachers at each school will meet twice a month to discuss and share new curriculum materials related to fractions and design joint interim assessments to measure student progress. Teachers will have ongoing assistance of a math instructional coach. In the summer, [the district will] review schedules to make sure fifth grade teachers have common planning time to meet. [The district will] provide lead teachers and/or principals with curriculum materials and the assistance of an instructional coach to guide implementation.”

Evaluating Impact. Measures of evaluation included “(1) percentage of students meeting objectives” as measured by “student test scores on end of unit assessment” and “(2) staff knowledge” and pedagogy, measured by regular and ongoing observations conducted by the school’s instructional leaders.

One approach to professional development is using peer intervisitations, in which teachers observe the classroom of a highly effective teacher. (See “Peer Intervisitations as a Professional Development Approach” on the following page.)

Peer Intervisitations as a Professional Development Approach

NewVisions for Public Schools (n.d.) provides the following information on peer visitations:

Who:

- Teacher to teacher (within a school or between schools);
- Conducted by a colleague, mentor, new teacher, lead teacher.

How:

- Can be scheduled or not; usually there is an agreed upon focus;
- Both colleagues debrief (What worked? What were the challenges? What strategies/tips can I use in my own classroom? Etc.);
- Low-inference templates and other tools can be used to facilitate note-taking, and to be used as a jumping off point for discussion.

Why:

- To share pedagogical practice;
- To support and facilitate reflection on best practices (Lesson aligned with unit goals? Teacher's use of proximity, questioning techniques, verbal flow between students/teacher, classroom management, etc.);
- To support and facilitate the development of early career teachers;
- To prepare for formal observations in a low-stakes environment;
- To gather data to inform/improve instruction. Beneficial for both parties (observer potentially discovers new techniques/strategies. Observed potentially gets useful feedback).

When:

- Can be organic and driven by teacher collegiality;
- Can be more formally structured (part of PD plan for teachers);
- At least once a week for mentors/mentees.

Reprinted from the NewVisions for Public Schools *KnowledgeBase* on Classroom Observations at <https://knowledgebase.newvisions.org/CustomAOIndividual.aspx?id=709>

Essential Steps Toward Implementing High-Quality Collegial Visits

Kelly Lock, an educator and instructional coach, describes the value of collegial visits, in which a teacher visits another teacher's classroom and observes that teacher's classroom strategies. She notes: "Quality collegial visits that transfer to meaningful and long-lasting job-embedded professional development are carefully planned classroom visits that have a clear focus, administrative participation, and an opportunity for reflection and application of newfound learning." Following are some guidelines for a successful collegial visit.

"PLANNING THE PURPOSE OF THE VISIT"

- Visits must have a documented focus on one or two specific practices that could lead to instructional improvement; everything else should be filtered out.
 - What strategies are being used by the teacher, and how are they being taught?
 - How are students applying the strategies? How do you know when the strategies are working?

"SELECTING THE TEACHER TO OBSERVE" (INTERNAL OR EXTERNAL)

- External observations have their pluses (e.g., fewer preexisting relationships and related anxieties, fewer preconceptions about students).
- Either way, teachers obviously must agree to be observed and be aware of the specific purpose of the visit.
- Observed teachers should have exhibited strengths in relevant teaching strategies and in building relationships with students; they should have valuable information about the profession to share.

"THE VISIT"

- Purpose, focus, protocol, and parameters (including student and collegial confidentiality and respect) must be established and conveyed ahead of time.
- Students should be made aware ahead of time as well.
- Notes on focused observations should be taken on a preselected document in accordance with the predetermined focus.

"ROLE OF THE VISIT FACILITATOR"—OR COACH, LEAD TEACHER, OR ADMINISTRATOR (WHERE APPLICABLE)

- Attend the observation and takes notes for comparison and reflection purposes.
- Serve as an informed support for future implementation purposes.
- Preplanning is very important if the observer goes alone, particularly in new situations.

"AFTER THE VISIT"

- Visit with the facilitator/coach/lead teacher/administrator to debrief and reflect.
- Debriefing via email is an option as well.

"NEXT STEPS"

- Create a realistic but urgent timeline for implementation of the new ideas or identified strategies.

"ONGOING REFLECTION"

- Reflect on the implementation of the new ideas or identified strategies.
- Meet with the facilitator/coach/lead teacher/administrator and analyze why the strategy worked or did not work.
- Try it again, compare notes, and continue to refine the approach.

Adapted from "Dear Colleague, Please Come for a Visit" by Kelly Lock, which appeared in the October 2006 issue of *Teachers Teaching Teachers*.

Recommendation 3: Systemic Academic Interventions

Develop and implement a schoolwide system to identify students' specific learning needs using assessment data, provide multitiered academic interventions, and employ ongoing progress monitoring to address student needs.

LINK TO RESEARCH

Academic intervention services is defined by New York State Education Department (2008) as “additional instruction which supplements the instruction provided in the general curriculum” for “students who are at risk of not achieving the state learning standards in English language arts, mathematics, social studies and/or science, or who are at risk of not gaining the knowledge and skills needed to meet or exceed designated performance levels on state assessments.” Across the state of New York, school leaders are searching for ways to enhance the current academic intervention services (AIS) programs in their schools to be able to identify students earlier, provide services to all students who require them, and measure student outcomes (Killeen & Sipple, 2004). Many schools begin to implement response to intervention (RTI) after determining that their current structures and processes were not meeting their students' academic needs.

The incorporation of an RTI model into established interventions has been found to improve student academic progress; specifically, it has been found to increase the number of children who demonstrate proficiency on state accountability tests (Heartland Area Education Agency 11, 2004).

According to the National Center on Response to Intervention (Prewitt & Mellard, 2010), RTI is a model of academic supports that “integrates assessment and intervention within a multi-level prevention system to maximize student achievement and to reduce behavioral problems.” These goals are accomplished through the identification of students at risk for poor learning outcomes, provision of evidence-based interventions, regular monitoring of student progress, and regularly adjusting the intensity and nature of those interventions depending on a student's responsiveness.

According to Prewitt and Mellard (2010), models of a responsive academic intervention program include a data-driven decision-making model that includes:

- The use of a schoolwide (universal) screening assessment to identify students at-risk for poor learning outcomes;
- Multitiered intervention programs and strategies that increase in levels of intensity;
- Frequent and ongoing progress monitoring to determine student progress and determine program efficacy;
- A team structure to organize and analyze student performance using progress monitoring data.

Although research indicates minimum components for successful implementation of responsive intervention programs, no specific model of RTI, intervention program or strategy, or progress monitoring tool is endorsed by Learning Point Associates. Instead, schools are

QUICK LINKS: Online Sources for More Information

Doing What Works: Providing Research-Based Education Practices Online (Website)
<http://dww.ed.gov/>

National Center on Response to Intervention: *What Is RTI?* (Webpage)
<http://www.rti4success.org/whatisrti/>

National Research Center on Learning Disabilities: *Tiered Service-Delivery Model* (Webpage)
http://www.nrclid.org/rti_practices/tiers.html

New York State Response to Intervention Technical Assistance Center (Website)
<http://www.nysrti.org>

encouraged to consider these research-based recommendations to make specific decisions regarding the structure and design of intervention programs that will best meet the needs of their situation.

IMPLEMENTATION CONSIDERATIONS

Schools face a number of challenges when selecting a strategy for implementing academic interventions. Local regulations, contracts, and resources such as time, funding, and personnel all play a major role. Schools must make the determination, based on individualized circumstances, of what will ultimately work best. The most effective programs are those that are launched with clear leadership, built from careful planning, and supported with schoolwide awareness and professional development prior to full implementation.

1. Identify a team of school staff members who will lead the “rollout” of the intervention.

This leadership team may vary according to the school’s demographics. Some schools choose to include teachers who work with subpopulations (e.g., English language learners and students with disabilities), and other schools include teachers who teach in the content areas in which RTI is being implemented (e.g., ELA teachers from each grade, literacy coach, and reading specialist). Network resources and coaches also should be considered.

2. Conduct careful planning to ensure the success of the rollout.

School leadership defines the intervention infrastructure, scheduling, resources, funding, staffing, screening and progress monitoring assessments, intervention programs, tools, and strategies. This process includes developing explicit plans, processes, and procedures prior to implementation. Following is a checklist of topics to cover:

Data-Based Decision Making

- Establish a team structure, routines, and procedures for making decisions.
- Set explicit decision rules to decide when students will move in, out, or within interventions.
- Develop record-keeping systems that communicate student progress to stakeholders (e.g., student, parent, teachers, AIS coordinator).

Assessments and Screenings

- Establish a yearly, schoolwide schedule for assessments and screening procedures (e.g., three times each year).
- Identify screening instrument(s) that will be used to identify students for interventions. Screening instruments should be valid and reliable and aligned with grade-level curriculum based on learning standards (e.g., state assessments, Acuity predictive assessments, or instructionally targeted assessments) or subject-specific and researched-based assessments (e.g., Woodcock-Johnson III Diagnostic Reading Battery, Qualitative Reading Inventory, Dynamic Indicators of Basic Early Literacy Skills).

- Establish participation criteria, select benchmarks or cutpoints at which risk is determined, and identify students who fail to meet benchmarks or fall below specified cutpoints.
- Create multitiered “entry points,” and establish multiple benchmarks to “slice the pie,” allowing students to receive targeted interventions that vary in levels of intensity (e.g., students 0 percent to 40 percent and 41 percent to 65 percent, or Level 1 and Level 2 on state assessments).

Tiered Intervention Programs

- Select evidence-based intervention programs and/or strategies to use with students who fall in various ranges based on the screening tool used.
- Determine the method for delivery of service (e.g., pull-out small-group instruction, afterschool instruction, Saturday program) and duration and frequency of service.
- Ensure that services and programs are “tiered” and increase in levels of intensity, which match the increasing needs of students.

Progress Monitoring

- Determine assessments to be used. Assessments can be both formal (e.g., AIMSweb, Acuity predictive assessments, or instructionally targeted assessments) and informal (e.g., checklist, running records).
- Establish a benchmark for performance (e.g., >40 percent and >65 percent). These benchmarks determine when students will move within, through, and out of tiers of interventions.
- Establish a timeline for progress monitoring. Monitoring may occur as frequently as every two weeks.

3. Create an awareness of the intervention, and provide adequate professional development to ensure that everyone is on board.

Many schools follow a “train the trainers” model in which selected staff members attend training and turnkey that training to other staff. Depending on which teachers and staff will be providing interventions, training also may be schoolwide. A critical component of the RTI implementation process is to ensure that stakeholders are clear about what is being implemented and why it is being implemented. School leaders must establish and communicate the goals and expected outcomes of adopting an RTI model while providing ongoing training and sufficient time for staff to fully understand the components and structures of a new intervention model. Successful implementation relies heavily on the ability of teachers and school leaders to implement RTI with fidelity.

Opportunities for AIS-related professional development should be embedded into the school’s annual professional development plan. Careful planning is essential when rolling out professional learning opportunities in the area of AIS.

4. Put the intervention plan into action.

Recommendations for implementation include “start small.” (See “Starting Small.”) This approach might include starting in one grade, one content area, or one classroom; or it could begin by focusing on one or two components of RTI. This decision should be what makes the most sense for the school based on existing resources, tools, and structures. At this phase, adjustments and adaptations are an ongoing part of the process.

Starting Small

Two approaches for “starting small” with an academic intervention program are to start with one essential component or to start with one small group.

Starting With One Essential Component

Build a model with a focus on one component at a time (e.g., screening, then data-based decision making, then progress monitoring, then intervention levels). Create a timeline for the implementation of each component, and align training for school staff with each phase of implementation.

Example

A middle school in the Midwest began the implementation of its RTI program by first focusing on reading programs and strategies for students identified as at risk. A second tier of interventions and progress monitoring were “rolled out” later in the year.

Starting With One Small Group

Implement the intervention program with a small pilot group. With this approach, it is best to investigate which components worked well and which need to be refined before scaling up to other classes, grades, or content areas.

Example

A Pennsylvania school implemented RTI in a small number of classrooms during the first year to determine what worked and what did not work. The school’s interventions team focused on creating a balance between moving too slowly (which they felt would minimize the impact of RTI and decrease staff buy-in) and moving too quickly (which might overwhelm teachers and students).

Adapted from *Response to Intervention Practices in Middle Schools*, a 2011 presentation by Daryl F. Mellard and Sarah L. Prewett, available online at http://www.rti4success.org/ppt/WBnr_April2011.ppt. This document was produced by the National Center on Response to Intervention and is in the public domain.

Long Beach (California) Unified School District

Long Beach Unified School District has a districtwide system to ensure appropriate instruction and tiered intervention for all students.

In California, schools are not permitted to use IQ-Achievement testing as a criterion for determining eligibility for special education services. The Long Beach Unified School District in California employs regular assessments and tiered interventions as part of both the pre-referral process and as best practice for serving the needs of all students. The district has responded to their high school students' literacy needs using a multi-tiered approach that incorporates a battery of eighth-grade assessments that are used to determine the needs of incoming ninth graders. In the spring, all eighth-grade students participate in a screening series, which is an examination of multiple measures of student achievement that includes the California standards test, course grades and an assessment that is part of the *Language!* curriculum the district has adopted.

All incoming ninth-grade students receive core literacy instruction. Based on a review of assessment data, students entering high school half a year to two years behind receive the core literacy instructional program as well as an additional literacy workshop course that provides them with support materials that scaffold the core literacy program. Entering high school students who are more than two years below grade level are enrolled in a double block of language arts that consists of an intensive English language arts program or an after-school reading program.

For their language arts curriculum, Long Beach has adopted the *Language!* and Lindamood-Bell curricula for intensive instructional programs in literacy. Lindamood-Bell focuses on developing phonemic skills for students having serious difficulties with text. Typically, students spend a semester in that intensive intervention and then transition into *Language!* Student progress is monitored throughout the school year using "cluster tests" taken primarily from the Lindamood-Bell and *Language!* curricula. In addition to the systematic supports for students, the Long Beach model includes monthly support meetings for teachers, summer institutes, and coaches that provide professional learning opportunities for teachers.

While the Long Beach approach to instruction and tiered intervention shares its key characteristics with RTI, they do not call this practice RTI, but simply call it "best practice for all students." They ask, "What do the data say about how students are performing and what instructional programs are necessary to support student growth?" Another important aspect of the Long Beach system, according to Office of Special Education Assistant Superintendent Judy Elliott, is that they do not base their decisions on a single data point. Multiple sources of data are examined to determine student needs. Long Beach views its practice as a systems approach to good instruction for all students rather than just a process to diagnose students with learning disabilities. They had such success with the practice at the high school level that they have recently applied it to their middle schools. Roughly 7 percent of students in Long Beach have IEPs [individualized education programs] as opposed to an average of 12-14 percent nationally.

Reprinted from *Meeting the Needs of Significantly Struggling Learners in High School: A Look at Approaches to Tiered Intervention* by Helen Duffy, available at http://www.betterhighschools.org/docs/NHSC_RTIBrief_08-02-07.pdf.

Recommendation 4: Instructional Rigor

Implement instructional strategies that increase opportunities for higher-order thinking, analysis and problem solving, and deeper content understanding.

LINK TO RESEARCH

Instruction that pushes students to engage in higher-level thinking leads to deeper learning for students (Marzano, Pickering, & Pollock, 2001; Newmann, Bryk, & Nagaoka, 2001; Pashler et al., 2007). Too often, particularly in schools where students are struggling, instruction focuses on lower-level thinking skills, basic content, and test preparation. Teachers of struggling student groups or tracks usually offer students “less exciting instruction, less emphasis on meaning and conceptualization, and more rote drill and practice activities” than do teachers of high-performing or heterogeneous groups and classes (Cotton, 1989, p. 8). Yet this focus on basic skills does not necessarily improve student achievement.

Several research studies were completed from 1990 to 2003 “which demonstrated that students who experienced higher levels of authentic instruction and assessment showed higher achievement than students who experienced lower levels of authentic instruction and assessment” (Newmann, King, & Carmichael, 2007, p. vii). These results included higher achievement on standardized tests (Newmann et al., 2001). It is also important to note that these results “were consistent for Grades 3–12, across different subject areas (mathematics, social studies, language arts, science), and for different students regardless of race, gender, or socioeconomic status” (Newmann et al., 2007, p. vii).

Teachers need to provide structured opportunities and time for students to take on higher-level cognitive work (Tomlinson, 2003). In discussing the *gradual release of responsibility model*, Fisher and Frey (2008) state that “the cognitive load should shift slowly and purposefully from teacher-as-model, to joint responsibility, to independent practice and application by the learner” (p. 2). This process allows students to become what Graves and Fitzgerald (2003) call “competent, independent learners” (p. 98).

There are several steps to ensure that students are being asked to complete this type of intellectually challenging work, which increases test scores and improves performance on authentic assessment measures as well. Newmann et al. (2001) define *authentically challenging intellectual work* as the “construction of knowledge, through the use of disciplined inquiry, to produce discourse, products, or performances that have value beyond school” (p. 14). Daggett (2005) agrees, stating that all students should be pushed “to achieve academic excellence, which ultimately boils down to applying rigorous knowledge to unpredictable, real-world situations, such as those that drive our rapidly changing world” (p. 5). Disciplined inquiry, which occurs in the classroom, requires that students “(1) use a prior knowledge base; (2) strive for in-depth understanding rather than superficial awareness; and (3) express their ideas and findings with elaborated communication” (Newmann et al., 2001, p. 15).

QUICK LINKS:

Online Sources for More Information

Doing What Works: Providing
Research-Based Education
Practices Online (Website)

<http://dww.ed.gov/>

*Organizing Instruction and
Study to Improve Learning*
(Publication)

[http://ies.ed.gov/ncee/
wc/pdf/practiceguides/
20072004.pdf](http://ies.ed.gov/ncee/wc/pdf/practiceguides/20072004.pdf)

IMPLEMENTATION CONSIDERATIONS

1. Cultivate schoolwide high expectations for students.

- Align instruction with the New York State P–12 Common Core Learning Standards. According to NYCDOE (2011), schools in New York City are set to have fully adopted the P–12 Common Core Learning Standards for students to take aligned assessments during the 2014–15 school year. These standards are internationally benchmarked and rigorous; they clearly explain what students at each grade level are expected to know and be able to do. Some schools were involved in pilot programs in 2010–11.
- Develop a shared understanding of instructional rigor through collaborative curriculum planning, design, and/or redesign. When developing or revising curriculum maps, identify opportunities for formative assessment tasks that encourage higher-level thinking for each unit of study.
- Through teacher collaboration, develop common student assignments that ask students to perform rigorous and authentic tasks.
- Through teacher collaboration, develop common student assessments that include rigorous and authentic summative assessment tasks.
- Monitor implementation of expectations through classroom observations, lesson plan review, and student achievement results on common formative assessments.

2. Provide professional development for teachers on instructional strategies that push students to engage in higher-order thinking.

- Provide ongoing professional development for teachers that describes the importance of pushing students to do higher-level thinking and provides strategies for how to do so. This training may be provided through ongoing professional development sessions and/or support of an instructional coach.
- Create clear expectations regarding how teachers should implement this professional development in the classroom (e.g., one strategy utilized each day as reflected in lesson plans, authentic assessments at the end of each unit).
- Identify how this professional development can be incorporated into scheduled teacher collaboration sessions.
- Monitor implementation of professional development through classroom observations, lesson plan review, and student achievement results on common formative assessments.

3. Develop examples of authentic intellectual work.

The following examples can be used to help school leaders and teachers understand what authentic intellectual work might look like.

Examples of High-Scoring and Low-Scoring Measures of Authentic Intellectual Work

The research report *Improving Chicago's Schools: Authentic Intellectual Work and Standardized Tests: Conflict or Coexistence?* by Newmann, Bryk, and Nagaoka (2001) provides examples of two sixth-grade writing assignments: one that scored high and one that scored low on measures of authentic intellectual work. The authors conclude each example with a commentary of why the assignment received the score that it did.

High Scoring Writing Assignment

Write a paper persuading someone to do something. Pick any topic that you feel strongly about, convince the reader to agree with your belief, and convince the reader to take a specific action on this belief.

Commentary

In this high scoring assignment, demands for construction of knowledge are evident because students have to select information and organize it into convincing arguments. By asking students to convince others to believe and act in a certain way, the task entails strong demands that the students support their views with reasons or other evidence, which calls for elaborated written communication. Finally, the intellectual challenge is connected to students' lives because they are to write on something they consider to be personally important.

Low Scoring Writing Assignment

Identify the parts of speech of each underlined word below. All eight parts of speech—nouns, pronouns, verbs, adjectives, adverbs, prepositions, conjunctions, and interjections—are included in this exercise.

1. My room is arranged for comfort and efficiency.
2. As you enter, you will find a wooden table on the left.
3. I write and type.
4. There is a book shelf near the table.
5. On this book shelf, I keep both my pencils and paper supplies.
6. I spend many hours in this room.
7. I often read or write there during the evening....

Commentary

This assignment requires no construction of knowledge or elaborated communication, and does not pose a question or problem clearly connected to students' lives. Instead it asks students to recall one-word responses, based on memorization or definitions of parts of speech.

Reprinted from page 24 of *Improving Chicago's Schools: Authentic Intellectual Work and Standardized Tests: Conflict or Coexistence?* by Fred M. Newmann, Anthony S. Bryk, and Jenny K. Nagaoka, available online at <http://ccsr.uchicago.edu/publications/p0a02.pdf>. Copyright © 2001 Consortium on Chicago School Research. Reprinted with permission.

Further examples of authentic intellectual instruction, teachers' assignments, and student work can be found in the following source:

Newmann, F. M., King, M. B., & Carmichael, D. L. (2007). *Authentic instruction and assessment: Common standards for rigor and relevance in teaching academic subjects*. Des Moines, IA: Iowa Department of Education. Retrieved June 24, 2011, from <http://centerforaiw.com/sites/centerforaiw.com/files/Authentic-Instruction-Assessment-BlueBook.pdf>

Perrysburg High School

Perrysburg High School in Perrysburg, Ohio, serves students in Grades 9–12. Perrysburg is a suburb of Toledo.

Perrysburg is the sole high school in the Perrysburg Exempted Village District in Wood County. Nate Ash teaches physics to eleventh and twelfth graders. Ash has taught professional development programs at the Northwest Ohio Center of Excellence in Science and Mathematics Education, and at Bowling Green State University in Ohio. He acts as a mentor to new science teachers.

Ash teaches physics using an inquiry approach. Students do lab activities and solve problems together to understand key concepts in physics. In each lesson he poses higher-order questions to help his students build explanations: How do you know that? What would happen if we changed this variable? How is this similar or different? Ash uses whiteboards in a number of ways: for group problem solving, representing a phenomenon with pictures, and student presentations.

Each new unit/topic is introduced with a hands-on activity. Ash presents a physical situation to students, has them manipulate the variables, and then narrows down their list of variables to design an experiment. Every experiment is introduced with an open-ended question (What would happen if...? What happens when...?). Students work in small groups to describe what happens with graphs, pictures, mathematical equations, and written expression. When they are finished, students present their work to the class in “whiteboard sessions.”

Ash explains how the whiteboard sessions give important insights into student thinking: “We can really see if the students understand on every different level how that problem works or how that situation works. And if there is a disjoint between any of those representations, that gives us someplace to go, that gives us something to talk about, something to work through.”

Students appreciate being in charge of their own learning, having the opportunity to challenge their peers, and develop critical thinking skills as they explain their ideas in front of a group. As Ash says, “Students really like this approach because, instead of just giving them the answer, it gives them a chance to explain to each other what’s going on. And I like it because all the times that I have done physics problems on the board and gone through the answers, I got pretty good at doing physics problems but my students never got any better at all.”

Ash has found that with this approach his students are no longer trying to find equations that fit the problems, but working to develop a deep understanding of the underlying concepts.

Excerpted from the *Doing What Works* website at http://dww.ed.gov/media/CL/OIS/TopicLevel/case_perrysburg_52708rev.pdf

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Suggestions for Further Reading

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