

Bronxwood Preparatory Academy

FINAL REPORT



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Introduction

About This Report

This final report is the result of an external school curriculum audit (ESCA) of Bronxwood Preparatory Academy conducted by Learning Point Associates, an affiliate of American Institutes for Research. This audit was conducted in response to the school being identified as in need of improvement 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 Bronxwood Preparatory Academy

Located in the Bronx, the Bronxwood Preparatory Academy (X514) is a high school with 362 students from Grade 9 through Grade 12. The school population comprises 48 percent black, 48 percent Hispanic, 2 percent white, and 2 percent Asian students.¹ The student body includes 68 percent English language learners (ELLs) and 20 percent special education students (Special Education Service Delivery Report).² Boys comprise 68.35 percent of the students, and 31.65 percent are girls. The average attendance rate for the 2009–10 school year is 82 percent. Sixty-eight percent of the student population is eligible for free lunch, and 11 percent of students are eligible for reduced-price lunch (Accountability and Overview Report 2009–2010)³.

Bronxwood Preparatory Academy initially began as a program in 2004 and received official status in the fall of 2005 as part of the NYCDOE's small school reform initiative.⁴ The school has changed campuses a number of times and recently relocated to a brand new facility shared with three other schools. Bronxwood recently modified the school's theme to reflect a career and college-readiness focus that is supplemented by a focus on sports and internships, designed to motivate and enhance student learning.⁵

The school has recently experienced an increase in the number of students who enter the school with a notably low peer index and many of whom are overage and under-credited. Consequently, the school has implemented a number of formal and informal strategies for addressing the needs of at-risk students, although many are still a work in progress. For example, data from grade-level scholarship reports, credit accumulation reports, and failure lists are generated through the HSST database and are used to identify struggling students at the end of the first semester. Students who have been identified as at-risk are referred to

¹ <https://www.nystart.gov/publicweb-rc/2010/43/AOR-2010-321100011514.pdf>

² http://schools.nyc.gov/documents/teachandlearn/sesdr/2010-11/sesdr_X514.pdf

³ <https://www.nystart.gov/publicweb-rc/2010/43/AOR-2010-321100011514.pdf>

⁴ http://schools.nyc.gov/documents/oaosi/cep/2010-11/cep_X514.pdf

⁵ http://schools.nyc.gov/documents/oaosi/cep/2010-11/cep_X514.pdf

tutoring services, which are available before school (zero period), during lunch, after school (PM school), and during the newly initiated Saturday School program. Additional academic supports include double ELA blogs for ninth graders.

Audit Process at Bronxwood Preparatory Academy

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 extracurriculars. Data were collected at the school level through teacher surveys, administrator interviews, classroom observations, and an analysis of documents submitted by Bronxwood Preparatory Academy. 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 June 9, 2011. During this meeting, 23 stakeholders from the Bronxwood school community read the reports, and 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 Bronxwood Preparatory Academy.

Key Findings

After considerable thought and discussion, co-interpretation participants determined a set of key findings. The wording of the key findings below matches the wording developed and agreed upon by co-interpretation participants at the meeting. These key findings are detailed in this section.

Critical Key Findings

CRITICAL KEY FINDING 1:

Based on observations, behavioral disruptions caused wasted time and lost productivity in almost half of all classes observed.

Critical Key Finding 1 summarizes a number of findings from observation data, indicating that student behavior issues were characterized as being anywhere from minor to major disruptors in almost half of observed classrooms. Instances of wasted time and lost productivity were also noted with relative frequency (45.5 percent of observed classrooms).

CRITICAL KEY FINDING 2:

Based on observation data, all classrooms showed evidence of procedural practices, but they were not consistent.

Observation data indicated that in the majority of classrooms observed (80 percent) teachers primarily focused on procedural practice with few explicit connections of procedures and information to meaningful key concepts. In a minority of classrooms (20 percent) teachers introduced and reiterated procedural practice while emphasizing appropriate conditions and characteristics of key concepts. However, this was far from consistently observed.

CRITICAL KEY FINDING 3:

About half of the teachers agree there is a schoolwide behavior system that they are a part of, and that they review behavioral data at least monthly

Co-interpretation participants developed this key finding based on three findings from teacher survey data. According to these findings, teacher respondents at Bronxwood Preparatory Academy were divided with regard to whether the school has a schoolwide behavior plan with 55 percent of respondents agreeing with this statement and 45 percent disagreeing with this statement. The majority of respondents (60 percent) reported that the strategies that teachers use for managing behavior are consistent with those used in classrooms throughout the school and receive behavior data at least a few times a month.

Positive Key Findings

POSITIVE KEY FINDING 1:

Based on classroom observation data, higher-order thinking, teacher/peer feedback, scaffolding, student content knowledge, and peer interaction were in evidence in classrooms, but they were not observed consistently in every classroom.

On average, observation data show that students were not required or given opportunities to consistently exercise higher-order thinking skills in the classroom. Participants at co-interpretation discussed that some teachers fostered in-depth discussions with their students and encouraged them to use higher-order thinking skills, but opportunities for higher-order thinking were less common in observed math and science classes. Additionally, observation data revealed that, on average, feedback was not always persistent or effective and sometimes failed to expand student understanding. While evidence of back and forth exchanges and attempts to scaffold student learning were noted, occasionally teachers showed their frustration with student responses.

POSITIVE KEY FINDING 2:

According to observations, 12 of 15 classrooms showed some evidence of warm and supportive relationships

Participants developed this key finding from classroom observation data showing that 80 percent of observed classrooms exhibited warm and supportive relationships between teachers and students. Two classrooms received the highest possible rating in this domain, with teachers using students' names, speaking in a warm, calm voice, and encouraging respect and student enthusiasm.

POSITIVE KEY FINDING 3:

Data from surveys, interviews, and school documents indicate across the board that the principal makes clear the goals of the school, communicates a strong vision, sets high standards of teaching, and supports teacher collaboration. During professional development, teachers are expected to share their newly acquired knowledge and skills.

Positive Key Finding 3 was developed based on findings from teacher surveys, interviews, and document review data. According to survey data, teacher respondents generally agree that the principal makes clear the goals of the school, communicates vision, and sets high standards of teaching. Additionally, participants discussed that interview respondents had noted that Bronxwood Preparatory Academy's current schedule provides teachers with opportunities to collaborate in a number of different settings.

Recommendations

Overview of Recommendations

During the Bronxwood Preparatory Academy co-interpretation, school staff and faculty identified schoolwide behavior policies and practices, student engagement, and over-reliance on procedural practice during instruction as priority areas for improvement. During the ESCA data collection process, auditors observed instances of inconsistent student behavior and engagement across classroom observations. Additionally, evidence of strategies to promote higher-order thinking and consistent use of feedback loops between teachers and students were not present throughout classroom observations, and there were relatively few explicit connections of procedures and information to meaningful key concepts. Thus, participants determined that there is a lack of consistency with regard to the implementation of rigorous instructional practices and high-quality instructional feedback that challenges and expands student understanding more successfully. Additional findings identified centered on a lack of consistent opportunities for students to engage in higher-order thinking or problem solving, particularly in areas such as math and science. The auditors believe that a dual approach to improvement may best serve students and staff: incorporating strategies to specifically address behavior and student engagement as well as continually working to implement rigorous instruction that provides appropriate academic challenges to students.

THE FOUR RECOMMENDATIONS

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

1. Develop and implement a common set of positive behavior expectations and a system for acknowledging and supporting appropriate behavior.
2. Initiate a schoolwide process for increasing student engagement and creating a sustainable and supportive learning environment. The aim is to improve student attendance, enhance participation, reduce boredom, end negative behaviors and the associated classroom management issues, and increase student achievement in academic and social skills.
3. Implement instructional strategies that increase opportunities for higher-order thinking, analysis and problem solving, and deeper content understanding.
4. Ensure that instructional strategies integrate high-quality feedback between the teacher and students or among students. Such feedback expands student understanding.

These four recommendations are discussed on the following pages. Each recommendation provides a review of research, specific actions the school may wish to take during its implementation process, examples of real-life schools that have successfully implemented strategies, and online resources for additional information. 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: Positive Behavior Management System

Develop and implement a common set of positive behavior expectations and a system for acknowledging and supporting appropriate behavior.

LINK TO RESEARCH

One of the greatest obstacles within urban schools is the large number of students whose behavior interferes with their achievement or the achievement of others. Often these students have behaved in a manner that disrupts the educational climate of the classroom and the school. One key element for changing this pattern is the implementation of a schoolwide behavior program that is developed with the input and support of parents and staff.

Effective schoolwide behavior programs have clearly established standards for safety, discipline, and respect. Students need a secure, orderly environment that promotes their personal well-being and supports learning. Rules should also be fair and stress students' responsibility to the school community, their parents, and themselves. All students in the school need to be aware of the rules, the reasons for the rules, and the consequences for breaking the rules. Effective discipline programs are based on praise and encouragement for positive behavior and clear, consistent consequences for misbehavior (Chicago Public Schools, 1998).

“Effective schools build and maintain a positive ‘social culture.’” Successful students are safe (don't hurt themselves or others), respectful (follow adult requests and get along with their peers), and responsible (arrive to class on time and complete assignments). These foundational skills are essential for a safe and orderly school environment. In addition, members of a positive social culture use higher-order skills, such as (a) impulse control, (b) anger management, (c) conflict resolution, (d) empathy, and (e) drug and alcohol use resistance and prevention. Research studies consistently show that schools that establish a positive social culture to also achieve the best academic gains (CaISTAT, 2011).

Positive behavioral interventions—when used correctly by teachers, administrators, and parents—encourage or strengthen desirable behavior and reduce inappropriate behavior. Positive interventions have a greater likelihood of enabling a student to change his or her behavior in a way that does not interrupt learning. Effective interventions encourage praise and recognition of positive behavior and demand clear and consistent responses to misbehavior. Children and youth tend to respond to positive techniques. In some cases, however, more restrictive interventions may be necessary to control and change extremely inappropriate and aggressive behavior (Chicago Public Schools, 1998).

Schoolwide positive behavioral support (SWPBS) is based on the research-based application of lessons learned from more than 7,000 schools currently implementing successful changes in their school environment. Schoolwide positive behavioral interventions and supports (SWPBIS) evolved from valid research in the field of special education. SWPBS is not a curriculum, intervention, or practice but a decision-making framework that guides selection, integration, and implementation of the best evidenced-based behavioral practices for improving important academic outcomes for all students (OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports, 2011).

QUICK LINKS:

Online Sources for More Information

Alcott Middle School Behavior Expectations and Related Teaching Materials (Video)

http://www.pbis.org/swpbs_videos/alcott_mid.aspx

Discovering School-Wide PBS: Moving Towards a Positive Future” from Florida’s Positive Behavior Support Project (Video)

http://www.pbis.org/swpbs_videos/pbs_video-discovering_swpbs.aspx

School-Wide PBIS Implementation in High Schools: Current Practice and Future Directions (Publication)

http://www.pbis.org/school/high_school_pbis.aspx

Tiered Interventions in High Schools: Using Primary Lessons Learned to Guide Ongoing Discussion (Publication)

http://www.pbis.org/school/high_school_pbis.aspx

Researchers have only recently begun to study the effects of schoolwide behavioral management systems and what it takes to implement these systems effectively. Although it is too early to offer “recipes for success,” the work of key researchers and their school-based colleagues are providing some encouraging developments. These schools understand that change is incremental and are approaching implementation of their schoolwide systems slowly and over an extended time period. Although there are different variations of schoolwide systems of behavioral support, most systems have certain features in common. The emphasis is on consistency—both throughout the building and across classrooms. The entire school staff is expected to adopt strategies that will be uniformly implemented. As a result, approaches necessitate professional development and long-term commitment by the school leadership for this innovation to take hold.

Common Features of Schoolwide Behavioral Management Systems

- Total staff commitment to managing behavior, whatever approach is taken.
- Clearly defined and communicated expectations and rules.
- Consequences and clearly stated procedures for correcting rule-breaking behaviors.
- An instructional component for teaching students self-control and/or social skill strategies.

Reprinted from Schoolwide Behavioral Management Systems by Mary K. Fitzsimmons, at <http://www.eric.ed.gov/PDFS/ED417515.pdf>. Published in 1998 as ERIC/OSEP Digest E563.

IMPLEMENTATION CONSIDERATIONS

1. Understand the guiding principles of student behavior management.

The OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports (2011) has established the following SWPBS guiding principles:

- “Develop a continuum of scientifically based behavior and academic interventions and supports.” If not already established, a well-articulated schoolwide behavior policy/student code inclusive of positive expectations, minor and major infractions, and so forth, must first be in place. Clarity around expectations for staff’s handling of in-class behaviors is important in this situation. Authentic faculty feedback and participation are important throughout the policy and system development processes.
- “Use data to make decisions and solve problems.” Data on both minor and major behavior incidents should be collected, tracked, analyzed, and utilized in decision making by the team and faculty on a monthly basis, at a minimum. Data should be presented in user-friendly formats.
- “Arrange the environment to prevent the development and occurrence of problem behavior.” Post 3–5 positively stated overarching schoolwide social expectations that are posted prominently around the school, particularly in problem areas.

- “Teach and encourage prosocial skills and behaviors.” Students should be introduced to or taught the schoolwide expectations, rules for specific settings, reward/consequence system, and related interventions/supports. Staff should be trained on how to present expectations to students. Ongoing communication and collaboration with families and the community are very important.
- “Implement evidenced-based behavioral practices with fidelity and accountability.” Interventions should be multitiered, increasing in levels of intensity and inclusive of evidence-based programs or strategies. The primary level (all students) is the overall behavior management plan. The secondary level (some students) is for a targeted group or focused on individual plans for those who did not respond to the first level. The tertiary level (few students) includes highly individualized students who did not respond to the first two levels.
- “Screen universally and monitor student performance and progress continuously.” There should be a plan for collecting data to evaluate PBS outcomes, wherein data is collected as scheduled and used to evaluate PBIS effectiveness for future adjustments.

2. Build a team.

Florida’s Positive Behavior Support Project (Florida Department of Education, 2002) outlines a SWPBS process to provide a systematic structure and formalized procedures that can be implemented during the summer months. The initial steps should be to establish the program, encourage all staff to buy in, and establish a schoolwide leadership team or behavior support team. The goal is not to develop yet another group but to fold SWPBS into the roles and responsibilities of an already established team. Members of the team should include administrators, (i.e., principal, assistant principal, or dean), counselors, social workers, the regular education teacher, the special education teacher, a member with behavior expertise, and a coach/district representative. It is vital that the administration supports the process, takes as active a role as the rest of the team, and attends most meetings.

3. Determine school capacity.

Other important implementation consideration points center around gauging and developing the school’s individual and collective capacities to implement a comprehensive program. Related initial key questions include the following:

- What are the schoolwide social expectations, routines, and so forth?
- Who at the schoolwide level has the unique disposition necessary to both firmly hold students accountable and support them as they attempt to adjust with fidelity?
- What are the procedural expectations of teachers for managing in-class behaviors?
- What manageable recourse do teachers have for patterns of extremely disruptive and disrespectful instances of behavior “in the moment” (i.e., immediate referrals to a dean/counselor/administration, in-school “timeout room,” and so forth, and what are the criteria for reentry)?

- What is a specific, realistic, and manageable continuum of interventions and supports?
- What is the specific, realistic, and manageable continuum of consequences for patterns of disruptive in-class behavior?
- How will the efficacy of chosen interventions and supports be intermittently monitored and adjusted as needed in a data-driven manner? Who is responsible for this monitoring?
- What are the mechanisms for notifying and collaborating with students' parents or guardians in the process early and often? Who is responsible for the communication (i.e., teachers, counselors, social workers, deans, or administrators)?
- What are the thresholds for more severe consequences/privilege losses for patterns of disruptive behaviors?
- What outside resources are available to support students and families struggling with issues that are affecting students' behavior but are well outside of the school's capacity to address?
- What privileges and incentives (i.e., extracurriculars, athletics, fieldtrips, social activities, and so forth) are currently in place that can serve as points of leverage? Do more privileges and incentives need to be identified?
- How are students who actively exhibit established desirable social behaviors formally recognized? Perhaps most importantly, how are those students who are actively attempting to make sustained social adjustments formally recognized and supported (without stigmatizing)?

Positive Behavior Support in the Classroom

- Arrange classroom to minimize crowding and distraction.
- Provide explicit classroom routines and directions that are linked to schoolwide routines and directions.
- Post three to five positively stated expectations. Teach and reinforce them.
- Provide frequent acknowledgment of appropriate behaviors.
- Give students multiple opportunities to respond and participate during instruction
- Actively supervise classes during instruction.
- Ignore or provide quick, direct, explicit reprimands/redirections in response to inappropriate behavior.
- Incorporate multiple strategies to acknowledge appropriate behavior (points, praise) linked to schoolwide strategies.
- Provide specific feedback in response to social and academic errors, and correct responses.

Adapted from Classroom Management: Self-Assessment Revised by Brandi Simonsen, Sarah Fairbanks, Amy Briesch, and George Sugai. Retrieved June 24, 2011, from http://www.pbis.org/pbis_resource_detail_page.aspx?Type=4&PBIS_ResourceID=174.

Schoolwide Positive Behavior Support in an Urban High School: A Case Study

A study to examine the impact of SWPBS was conducted by Chicago Public Schools during a three-year period. The implementation high school served an estimated 1,800 students during the first year of the study. The school served a diverse student body with the following racial and ethnic makeup: 36 percent African American, 36 percent Hispanic, 16 percent Asian American, 8 percent Caucasian, 2 percent Native American, and 2 percent other, with 21 percent demonstrating limited English proficiency (LEP). In addition, 89 percent qualified for free or reduced-price lunch and 20 percent were identified as students with disabilities (SWDs).

The results of the study revealed that it took about two years for the school to fully implement all components of the SWPBS plan. However, by the third year the average rate of daily discipline referrals had been reduced by 20 percent. Successful implementation strategies cited by the school included the following:

- Convening a “PBS team” with various stakeholders from the school (e.g. administrator, educator, parents and students) for a day of training and to develop an action plan.
- Conducting a summer trial intervention with about 100 students during a summer activity to test teaching systems using positive behavior expectations.
- Providing teachers with key products such as sample copies of social skills lesson plans, posters reflecting schoolwide behavior expectations, and sample syllabi.
- Conducting grade-level assemblies to introduce rationales for the expected behavior and to provide opportunities to practice positive and negative examples of specific behaviors (i.e., respectful walking in the hallway).
- A system of rewards, including redeemable “acknowledgement” tickets that could be awarded to individual students for exhibiting positive behavior.
- Holding schoolwide celebrations that are contingent on the overall reduction of disciplinary referrals.

(Bohanon, H., Fenning, P., Carney, K., Minnis, M., Anderson-Harriss, S., Moroz, K., Hicks, K., Kasper, B., Culos, C., Sailor, W., & Piggott, T. (2006). School-wide application of positive behavior support in an urban high school: A case study. *Journal of Positive Behavior Interventions*, 8(3), 131-145.

Recommendation 2: Student Engagement

Initiate a schoolwide process for increasing student engagement and creating a sustainable and supportive learning environment. The aim is to improve student attendance, enhance participation, reduce boredom, end negative behaviors and the associated classroom management issues, and increase student achievement in academic and social skills.

LINK TO RESEARCH

Student engagement provides an essential foundation for increasing achievement levels. “Educators must work to build engagement levels if they hope to support students in meeting higher standards” (Learning Point Associates, 2005, p. 2).

Literature about middle school reform acknowledges the importance of an academically challenging and supportive environment to engage young adolescent learners. Student motivation, a meaningful curriculum, and student choice also are important factors for engaging middle-level learners (Caskey & Anfara, 2007; Learning Point Associates, 2005; Newmann, Marks, & Gamoran, 1995).

In a report on the 2009 High School Survey of Student Engagement (HSSSE), which was taken by 42,754 students, Yazzie-Mintz (2010, pp. 2–3) describes a spectrum of student disengagement—from temporary boredom to dropping out—and attributes this disengagement to the following: uninteresting and irrelevant material, work being too challenging or not challenging enough, no interaction with the teacher, not liking the school or the teacher, not seeing value in the assigned work, adults at the school not caring about the student, safety and bullying concerns, schoolwork not connecting to real world or real work, feeling little connection with any adult at the school, teacher favoritism, ineffective instruction or instructional methods, feeling unheard and not responded to or respected, and feelings of frustration and disconnection.

When students feel marginalized or alienated at school, they lose interest and become disengaged. Yazzie-Mintz (2010, p. 17) concludes that there are considerable gaps not only in academic achievement but also in student engagement and suggests the integration of engagement data with academic data as a useful tool for school planning and decision making.

Factors that would increase student engagement, according to the surveyed students (Yazzie-Mintz, 2010, pp. 18–23) are as follows: supportive and nurturing schools; increased individualization; classes that are more fun as well as interactive, experiential, and relevant; a schoolwide belief in relationships, respect, and responsibility; coaching and modeling for the staff of good student engagement practices; reflection on and response to student ideas; adult understanding of student skills, strengths, and interests and having these qualities inform instruction; experiential learning and interdisciplinary studies; and opportunities for students to work together on finding solutions to real-world problems and issues.

Students need to build a sense of self-efficacy (Learning Point Associates, 2003) in an inclusive environment in which they can achieve competence. They should be engaged in authentic and personally meaningful work, using a culturally relevant curriculum with an appropriate level of difficulty and challenge—one that requires problem solving (Voke, 2002).

QUICK LINKS: Online Sources for More Information

Center for Mental Health in Schools (Website)
<http://smhp.psych.ucla.edu/>

Collaborative for Academic, Social, and Emotional Learning (Website)
<http://www.casel.org>

Illinois Learning Standards for Social/Emotional Learning (Website)
http://isbe.state.il.us/ils/social_emotional/standards.htm

Morningside Center for Teaching Social Responsibility (Website)
<http://www.morningsidecenter.org>

In addition, Gordon (2006) suggests the recognition and leveraging of individual student strengths and recalls a typical student response from the 2005 Gallup Youth Survey (pp. 77–80):

“My teacher understood the way that I learned and worked. I was never criticized for my ideas or feelings, but I was met with questions and ideas that could change the way I looked at something.” —Jessica, 17, Waverly, IA (p. 77)

A rubric titled the “Partnership Guide for Culturally Responsive Teaching” (Ginsberg & Wlodkowski, 2000, pp. 185–187) offers a list of engagement activities (establishing inclusion, developing a positive attitude, enhancing meaning and engendering competence) and assessment tools. The Executive Summary of *Engaging Schools* (National Academy of Sciences, 2003) provides 10 recommendations for reaching “the goals of meaningful engagement and genuine improvements in achievement” for high school students (pp. 4–9). Easton (2008) discusses engaging struggling high school students by using experiential learning, essential questions and a whole-child perspective in curriculum development, instructional strategies, professional development, and teacher evaluations. “If there is a secret to motivation in the classroom,” says Gordon (2006, p. 80), “it lies in the interaction between the teacher and the student.”

“There is a growing consensus that whatever else is done, schools must also become places where it is easier for students and teachers to know one another well and for students to connect to the school and its purposes, says Sergiovanni (2000, p. 58). “Schools in other words must be caring and learning communities.”

IMPLEMENTATION CONSIDERATIONS: WHOLE-SCHOOL PRACTICES

Incorporating student engagement practices should be part of the annual school improvement process. Whole-school practices such as building a safe and supportive school environment are part of this process. Students can learn effectively only in environments in which they feel safe and supported and where their teachers have high expectations for their learning. Implementation of a schoolwide positive behavior plan that is based on pro-social values, social competencies, incentives, and positive peer relationships will lay the foundation for classroom-level work and must occur before the classroom work can begin.

The following guidelines were developed by the Victoria Department of Education and Early Child Development (OCED, 2003) for implementation of effective student engagement strategies across whole schools at the building level:

1. Continue to create a positive school culture.

Teachers and staff must recognize students as individuals by acknowledging and celebrating the diversity of the student population. The school must find ways to connect students to school (through clubs, sports, student council, and other activities) so they develop a sense of belonging. The school should provide transition programs and practices at different stages of schooling that will minimize anxiety, increase resilience, and ensure that students develop a readiness to enter their new environment and make successful transitions between year levels.

2. Encourage student participation.

Giving students a voice is not simply about the opportunity to communicate ideas and opinions; it also is about having the power to influence change. Incorporating meaningful involvement of students means validating and authorizing them to represent their own ideas, opinions, knowledge, and experiences throughout education to improve the school.

3. Proactively engage with parents/caretakers.

Keys to successful partnerships with parents/caretakers and families include strong two-way communication, volunteer opportunities, curricula-related collaborations, shared decision making, community-based partnerships, and efficacy building.

4. Implement preventative and early interventions.

The school needs to determine how it will intervene when students exhibit disengaged behaviors—specifically poor attendance and anti-social behaviors. Prevention strategies should target the whole school and should be designed to reduce any risk factors that may contribute to attendance or behavioral issues.

5. Respond to individual students.

The school should have a process in place to identify and respond to individual students who require additional assistance and support. It is imperative to coordinate early intervention and prevention strategies that utilize internal as well as external support services in order to identify and address the barriers to learning that individual students may be facing.

Schools also can implement major changes to their structures that can make it easier to develop positive learning relationships, including small learning communities, alternative scheduling, team teaching, teaching continuity, school-based enterprises, and professional learning communities.

IMPLEMENTATION CONSIDERATIONS: CLASSROOM PRACTICES

Keeping students focused and engaged in the classroom is quite a challenge amid the entire complex of changes—physical, intellectual, emotional, and social—that they experience during this phase of their lives. Adolescence represents a critical period during which youth 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, which can present a challenge to keeping them on-task in the classroom (Zimmer-Gembeck & Collins, 2003).

1. Relate lessons to students' lives.

A relevant curriculum relates content to the daily lives, concerns, experiences, and pertinent social issues of the learners. Teachers can gain insight into student concerns by taking periodic interest inventories, through informal conversations, and from classroom dialogue (Learning Point Associates, 2005). These issues and topics then can be incorporated into units, lesson plans, and further classroom discussions.

2. Make the learning authentic.

Newmann et al. (1995) advocate for authentic instructional practices to engage learners and offer three criteria for authentic instructional practices: construction of knowledge, disciplined inquiry, and value beyond the school.

The first criterion for authentic instructional practices is to facilitate the construction of knowledge by acknowledging students' existing understanding and experience. Identifying students' preconceptions and initial understanding is critical to the learning process. "If students' preconceptions are not addressed directly, they often memorize content (e.g., formulas in physics), yet still use their experience-based preconceptions to act in the world" (Donovan & Bransford, 2005, p. 5).

The second criterion for authentic instructional practices is to facilitate disciplined inquiry through structured activities; the inquiry process is critical to the construction of knowledge (Marzano, 2003; Newmann et al., 1995). This process consists of building on the learner's prior knowledge to develop a deeper understanding, integrating new information, and using the knowledge in new ways.

The third criterion for authentic instructional practices is value beyond school (Newmann et al., 1995). This criterion may entail connecting content to personal or public issues as well as the demonstration of understanding to an audience beyond the school. Examples of such activities include writing persuasive letters to the city council to advocate for a skate park, interviewing community elders for an oral history project, or communicating the impact of a development project using scientific concepts.

3. Give students choices.

Finally, providing choice in middle-level classrooms will engage learners. Providing opportunities for students to select a topic or text acknowledges young adolescents' need to exercise more decision-making power. Giving students ownership in their learning process increases motivation and keeps interest levels high. Students who have a strong interest in a specific subject may wish to pursue an independent project. These projects may be used as a differentiated way to explore the curriculum. (See "Regard for Adolescent Perspectives in the Classroom.")

Regard for Adolescent Perspectives in the Classroom

Following are some suggestions for showing regard for adolescent perspectives. These ideas are based on the work of Smutny, Walker, and Meckstroth (1997) and Tomlinson (1999).

- Independent projects will extend learning beyond the curriculum in the textbook and develop enthusiasm, commitment, and academic skills in addition to allowing students to develop deeper relationships with subject matter.
- “Brainstorming with...children on what kinds of projects they could do may also generate ideas teachers may never have thought of on their own” (Smutny, 2000, p. 7).
- Surveying students’ interests in the beginning of the school year will give teachers direction in planning activities that will “get students on board” from the start.
- Surveying again at key points during the year will inform teachers of new interests that develop as their students grow.
- Interest centers are designed to motivate students’ exploration of topics in which they have a particular interest. They are usually comprised of objects that students can explore, such as shells, leaves, maps, or projects, and are centered around broad topics. Students can choose from the menu and note their choices accordingly. Teachers decide how many items on the menu (minimum) that each student is required to complete. This is adjusted to meet instructional needs on an individual basis.

Examples of Student Engagement

The National Center for School Engagement (2007) compiled the following examples of student engagement best practices from school districts across the United States:

Factor in Math Fun: In Oswego, New York, a Factoring Fan Club was created for 9th grade math students to get them excited about factoring, to keep it fresh in their minds, and to be “good” at factoring. Source: Oswego School District, Oswego, NY

Celebrate Pi Day on 3/14: This event was created to help students enjoy math by offering a fun-filled day honoring pi. Events included a pie eating contest, measuring the diameter and circumference of round objects to calculate pi, and other games related to circles. Source: Independence School District, Independence, VA

Mobilize Community: Community Now! is an asset-based community development tool of the Connection Institute. It uses asset-based language and planning to bring the community together to discover what values the community shares as a whole. It then works to mobilize community members around its assets and shares values to become proactive in its planning rather than reactive. Source: Kittery Children’s Leadership Council, Kittery, ME

Collaborate with Higher Education: In Mesquite, Texas, a local college delivers 3.5 hours of continuing education courses (“Educational Opportunities”) to truant students and their families. The curriculum includes the negative consequences associated with poor school attendance and the positive consequences associated with scholastic achievement. Transition from high school to college is discussed and a tour of the college is provided. Source: Dallas Independent School District, TX

Offer Incentives: As a reward, a lunch-time soccer game is organized for students with good attendance by school staff. Source: Summit School District, Frisco, CO

Support Positive Behavior: Jacksonville School District adapted the principles of Got Fish? (a book to build business morale) for the classroom. Principles include: being there, play, choosing your behavior, and make their day. Students are recognized when observed “living” each of the principles. Source: Jacksonville School District, Jacksonville, FL

Create 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 roll”, in which students are recognized for doing their best, following directions, and not talking out more than 3 times a day. Source: Linn Benton Lincoln Education Service District, Eugene, OR

Facilitate Positive Student-Teacher Connections: Some schools in Oregon encourage students to sign up for a one-on-one lunch with their teacher during school time. The teacher uses this time to get to know the student and offers them encouragement and praise. Children and youth benefit when their teachers demonstrate that they care about student well-being in addition to academic success. Source: Linn Benton Lincoln Education Service District, Eugene, OR

Reprinted from *21 Ways to Engage Students in School*, available online at <http://www.schoolengagement.org/TuancypreventionRegistry/Admin/Resources/Resources/21WaystoEngageStudentsinSchool.pdf>. Copyright © 2007 National Center for School Engagement. Reprinted with permission.

Recommendation 3: 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/wwc/pdf/
practiceguides/20072004.
pdf](http://ies.ed.gov/ncee/wwc/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 example 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

**QUICK LINKS:
Online Sources
for More Information**

Doing What Works (Website)

http://dww.ed.gov/How-to-Organize-Your-Teaching/Higher-Order-Questions/see/?T_ID=19&P_ID=43

Doing What Works, Essential Questions (Publication)

http://dww.ed.gov/launcher.cfm?media/CL/OIS/HQ/See/584_hq_mats_essential_questions.pdf

Doing What Works, Using Higher Order Questions to Encourage Explanations (Publication)

http://dww.ed.gov/launcher.cfm?media/CL/OIS/HQ/See/585_hq_mats_student_explanation-1.pdf

Doing What Works, Socratic Seminar Planning Form (Publication)

http://dww.ed.gov/launcher.cfm?media/CL/OIS/HQ/See/583_hq_mats_seminars.pdf

Focus on Effectiveness, Northwest Regional Educational Laboratory (Website)

<http://www.netc.org/focus/strategies/>

IES Practice Guide on Organizing instruction and study to improve student learning (Publication)

<http://ies.ed.gov/ncee/wvc/pdf/practiceguides/20072004.pdf>

Recommendation 4: Instructional Feedback

Ensure that instructional strategies integrate high-quality feedback between the teacher and students or among students. Such feedback expands student understanding.

LINK TO RESEARCH

A meta-analysis of research conducted on instructional feedback, found feedback to be one of the most powerful influences on learning and achievement (Hattie & Timperly, 2007). In *The Power of Feedback*, authors note that “feedback can be conceptualized as information provided by an agent (e.g., teacher, peer, book, parent, self, experience) regarding aspects of one’s performance or understanding.”

“Many teachers spend a considerable proportion of their instructional time in whole-class discussions or question-and-answer sessions, but these sessions tend to rehearse existing knowledge rather than create new knowledge for students. Furthermore, teachers generally listen for the ‘correct’ answer instead of listening for what they can learn about the students’ thinking” (Davis, 1997).

Research indicates that (a) telling students that answers are right or wrong has a negative effect on achievement; (b) providing students with correct answers has a moderate effect; (c) explaining what is correct and what is not correct has a greater effect. (Marzano et al., 2001).

According to the Classroom Assessment Scoring System – Secondary Manual, when properly implemented, instructional feedback “expands and extends learning and understanding and encourages student participation” (Pianta et al., 2007, p. 49). Feedback needs to provide information specifically relating to the task or process of learning that fill a gap between what is understood and what is aimed to be understood (Sadler, 1989). Feedback itself can “take on the form of new instruction, rather than informing the students solely about correctness” (Kulhavy, 1977, p.212). Through feedback, teachers provide students with opportunities to obtain a deeper understanding of material and concepts through back and forth exchanges called “feedback loops” and by providing additional information; opportunities to explain their thinking and rationale for response and actions; opportunities to perform at higher levels than they would be able to perform independently through scaffolding; and increases student involvement and persistence through encouragement and affirmation (Pianta et al., 2007, p. 49).

IMPLEMENTATION CONSIDERATIONS

There are many ways in which teachers can deliver feedback to students and for students to receive feedback from teachers, peers, and other sources. For students, it means gaining information about how and what they understand and misunderstand, finding directions and strategies that they must take to improve, and seeking assistance to understand the goals of the learning (Bangert-Drowns, Kulik & Kulik, 1991).

1. Provide teachers with ongoing professional development opportunities for teachers to learn to respond effectively during whole class discussions and when providing feedback to individual students and small groups.

- **Workshops** – Identify workshops and other professional learning opportunities for teachers to learn the value of feedback. Focus professional development on building opportunities for student explanations in the classroom.
- **Peer observations** – Support teach collaboration by giving them tools designed to help them reflect on a peer’s practice. Observations should focus on the use of questioning and feedback in classroom discussions and give each other feedback on the questions they ask and the kinds of student responses generated.
- **Discuss classroom examples** – Provide examples for teachers to discuss how teachers help students to make their thinking visible and get feedback on their explanations. Discuss the strengths and weakness of instructional approaches used to encourage explanations.

2. Provide opportunities for teachers to incorporate instructional strategies that facilitate high-quality feedback into curriculum documents and lesson plans. Follow these recommendations from The Teaching Center (2009).

- **Include notes of when they will pause to ask and answer questions.** Asking questions throughout the class will not only make the class more interactive, but also help teachers measure and improve student learning.
- **Ask a mix of different types of questions.** Use “closed” questions, or questions that have a limited number of correct answers, to test students’ comprehension and retention of important information. Also ask managerial questions to ensure, for example, that your students understand an assignment or have access to necessary materials. “Open” questions, which prompt multiple and sometimes conflicting answers, are often the most effective in encouraging discussion and active learning in the classroom.
- **Wait for students to think and formulate responses.** Waiting 5–10 seconds will increase the number of students who volunteer to answer and will lead to longer, more complex answers. If students do not volunteer before 5 seconds have passed, teachers should refrain from answering their own question, which will only communicate to students that if they do not answer, teachers will do their thinking for them. If the students are unable to answer after sufficient time for thinking has passed, rephrase the question.
- **Do not interrupt students’ answers.** Often, teachers find themselves wanting to interrupt because they think they know what the student is going to say, or simply because they are passionate about the material. Teachers should resist this temptation. Hearing the students’ full responses will allow them to give them credit for their ideas and to determine when they have not yet understood the material.
- **Show interest in students’ answers, whether right or wrong.** Teachers should encourage students when they are offering answers by nodding, looking at them, and using facial expressions that show they are listening and engaged.

- **Develop responses that keep students thinking.** For example, ask the rest of the class to respond to an idea that one student has just presented, or ask the student who answered to explain the thinking that led to her answer.
- **If a student gives an incorrect or weak answer, point out what is incorrect or weak about the answer, but ask the student a follow-up question that will lead that student, and the class, to the correct or stronger answer.** For example, note that the student's answer overlooks the most important conclusion of the topic being discussed, teachers should then ask that same student to try to recall what that conclusion is. If he or she does not recall the conclusion, open this question up to the class.
- **Follow a “yes-or- no” question with an additional question.** For example, follow up by asking students to explain why they answered the way they did, to provide evidence or an example, or to respond to a yes-or-no answer given by another student. It's insufficient and shortsighted to rely on quick, right answers as indications of students' knowledge of subject matter. Probe children's thinking when they respond. Ask: Why do you think that? Why does that make sense? Convince us. Prove it. Does anyone have a different way to think about the problem? Does anyone have another explanation?

Good Feedback

- Clear and unambiguous
- Specific
- Supportive, formative and developmental
- Timely
- Understood

Using Instructional Feedback to Promote Learning

In February 2010, the Bill & Melinda Gates Foundation issued a report—*Small High School at Work: A Case Study of Six Gates-Funded Schools in New York City*—a case study of six public high schools. Guided by the research literature on effective school (and instructional) practices, the report documents evidence and examples of high-quality instruction which promotes student learning and engages students in a deep understanding of material such as: metacognitive skill-building, frequent assessment and feedback and quality questioning techniques. Danielson’s (2007) framework for teaching identifies the quality of teacher questions as one component of rigorous instruction. Students must be encouraged to both ask and answer challenging questions. These questions should require students to justify their arguments and responses, pressing for clarification and explanations when needed (Fancali et al., 2010).

QUALITY QUESTIONING TECHNIQUES AND FEEDBACK LOOPS

An 11th grade social studies class at School 6 was studying the Progressive Era. Following an introduction to relevant vocabulary, students analyzed a political cartoon in which the “Lion Tamer” represented President Theodore Roosevelt. The teacher posed several questions about the cartoon to the whole class. In the example below, the teacher frequently probed students and asked students to elaborate on their answers by providing specific examples. The responses elicited debate whether the President would be able to control the trusts.

“What might President Roosevelt’s personality be like based on what you see in the cartoon?”

“Does the cartoonist seem to believe that President Roosevelt will be able to control the trusts?”

“Why do you think this?”

MODELING COMPLEX THINKING AND PROCESSING

Teachers model complex thinking by demonstrating the process and steps they use to analyze and synthesize information and to solve problems.

A 10th grade English teacher at School 3 verbalized her thought process on a reading-response assignment she had given: “Ask a question of your text and explain your thought process.” The question the teacher asked of *Catcher in the Rye* was, “Will Holden ever be happy?” She explained, “My thought process was, I am wondering this because he seems totally depressed and has no goals or hope.” Later in the period, the teacher modeled inference making. As she read aloud from the text, she stopped to point out when she was making an inference: “I’m going to model what inference is because we are working on finding quotes to support our statements: I’m going to infer that Holden is sweaty because he is nervous.... I’m going to infer that Holden is good at heart; he gives the benefit of the doubt. You can point to these lines [in the book] as evidence.”

ENCOURAGING METACOGNITION

Metacognitive skills include noticing when one doesn’t understand something and taking steps to remedy the situation, and formulating questions.

In a 11th – 12th grade mathematics class at School 3, the teacher encouraged students to make internal thought processes overt: “How did you solve this equation?” “Does anyone else have another way to solve the equation?”

Adapted from pages 50–57 of *Small High Schools at Work: A Case Study of Six Gates-Funded Schools in New York City*. Cheri Fancali, Reva Jaffe-Walter, Vernay Mitchell-McKnight, Nancy Nevarez, Eliana Orellana, and Lea Williams Rose, available online at <http://www.aed.org/Publications/loader.cfm?url=/commonsot/security/getfile.cfm&pageid=35987>. This report was published in 2010 by The Academy for Educational Development

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Suggested Further Reading

Instructional Rigor

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