



Question: What do we know about effective middle schools?

Response:

To prepare for the challenge of developing and supporting middle school reform, a brief literature review is provided below to describe a variety of best practices in middle grades education. These practices are organized according to three characteristics of high-performing middle schools that have been identified by the National Forum to Accelerate Middle-Grades Reform (2007). Specifically, high-performing schools are academically excellent, developmentally responsive, and socially equitable.

Academically Excellent Schools

Academically excellent schools are those that: challenge students with high standards and a rigorous curriculum that promotes complex thinking skills; support students with differentiated instruction and assessment; encourage parent and student engagement in the educational process; and provide an environment conducive to learning. In addition, academically excellent schools promote the development and application of essential skills to authentic, real-world problems (National Forum, 2007; Heller, Calderon, and Medrich, 2003).

Rigorous Curriculum and Instruction

To provide the greatest intellectual and practical benefits, middle school curriculum must be challenging for all students (Heller et al., 2003). Research indicates that middle schools and high schools that work together to encourage rigorous coursework can be successful at increasing student enrollment in more advanced high school courses. One study found that when secondary schools collaborated to emphasize the importance of rigorous classes, about a quarter more students enrolled in math and about a third more enrolled in science college-preparatory courses than did a general national sample (Cooney & Bottoms, 2002). Research specifically identifies the advantages of taking algebra in middle school. Students who take algebra before the 9th grade are more likely to take calculus in high school and to attend college than those who do not (Wheelcock, 1995; Riley, 1997; Cooney & Bottoms, 2002). This trend is true for both low and high-achieving students (Gamoran & Hannigan, 2000). Excellent schools also hold themselves accountable for student success by gathering data and administering benchmarks to monitor progress (National Forum, 2007) with a coherent set of measures that matches and measures achievement goals (Evertson & Neal, 2006). Academically excellent schools examine both the process (that is, use formative assessments) and the outcomes of learning (by using summative assessments).

Student Engagement

Relevant instruction that relates content to students' interests has been found to significantly affect achievement (Heller et al., 2003). Teachers must proactively engage their students in learning and encourage self-regulation and community building (Evertson & Neal, 2006). Perry (2005) suggests that student engagement is best promoted when academic programs consider varied student interests such as technology, foreign languages, and music. In addition, differentiated instruction is key to

meeting the various learning styles and interests of all students. Using a variety of materials and formats such as lectures with overheads, PowerPoint presentations, or other media may promote engagement. In addition, engagement may be encouraged by using non-traditional student-centered strategies such as cooperative learning groups, experiential learning, and student-driven projects. Evidence shows that students can better learn multiple concepts and skills when they are embedded within these types of more complex projects and problems (Evertson & Neal, 2006), and that teachers can use these methods to assess knowledge and skills in non-traditional ways (National Forum, 2007).

Parental Involvement

Parental support is especially important during the transitional periods into middle school and from middle school to high school (Perry, 2005). However, parental involvement in education usually declines after elementary school (Heller et al., 2003). Despite an increase in peer emulation during adolescence, parents must remain actively engaged in the education of their children through awareness of daily activities and academic and social involvement opportunities (Caskey & Anfara 2007). Izzo and colleagues (1999) found that parent involvement in both the home and at school is positively associated with student achievement, and this relationship has been found across all income levels (Marcon, 1999). Academically excellent schools are those that successfully engage parents in the educational process. Epstein, Simon, and Salinas (1997) found that after implementing a program in which parents were involved in their children's learning at home, writing scores increased in 6th and 8th graders. They also found that greater parent involvement in the program coincided with better grades in language arts and science. Academically excellent schools also expand beyond parental involvement to include families and other community partners who support the future success and achievement of students at the school. These schools capitalize on the experiences of their partners and create multiple networks within the community.

Positive School Climate

Excellent schools operate as a community of practice in which learning, exploration, and reflection are frequent. Heller et al. (2003) recommend creating a climate of "academic press," which consists of engaging students in intellectual activities and setting goals. With such a climate, researchers have found academic benefits, such as gains in mathematics achievement (Phillips, 1997). Climate survey research in Austin ISD also suggests a relationship between academic press and student achievement on TAKS (Cornetto & Schmitt, in press). Positive relationships among school staff also are related to high achievement. Hoy and Sabo (1997) found that student achievement was improved in middle schools where teachers and administrators had strong professional and emotional relationships. Both academic press and staff social support predict achievement regardless of students' backgrounds and their school demographics (Hoy & Sabo, 1997). Schools in which there is shared knowledge and responsibility also are able to maximize best practices and address classroom management proactively (Evertson & Neal, 2006). Positive school climate and student feelings of commitment and community in their school are key factors in promoting academic success.

School Size and Organizational Structure

While evidence is mixed, there has been some support for the advantages of small schools (less than 400 students) for young adolescents (Heller et al., 2003). Research has suggested that smaller school sizes positively influence student achievement, possibly due to more positive teacher attitudes. Mertens, Flowers, and Mulhall (2001) report that an unexpected advantage of small school size is that they tend to have more optimal instructional practices and greater parental involvement. While small schools can be expensive and incompatible with large urban districts, research shows that the effect of small schools on academic achievement is mediated through other features such as the quality of the social environment and students' attachment to the school (Cotton, 2001). Creating "schools within schools" and block scheduling have been suggested as strategies that can be used to foster the relationships that are supported in small schools. Cobb, Abate, and Baker (1999) reported that they did not find anything conclusive on whether the 4X4 block schedule improved academic achievement; however, a more recent review of research on block scheduling concludes that it appears to increase student grade point averages and improve school climate (Zepeda & Mayers, 2006).

School structure also is important for staff. Flowers, Mertens, and Mulhall (2000) report that instructional teaming, and particularly interdisciplinary teaming, have been associated with increased achievement. These results are even more robust when teams have common and frequent meeting times to discuss goals and plan curricula. Academic excellence is best supported when teachers have regular opportunities to work with their colleagues to deepen their knowledge and improve their practice (National Forum, 2007).

Developmentally Responsive Schools

In addition to academic excellence, the National Forum to Accelerate Middle-Grades Reform emphasizes the importance of developmentally responsive practices in middle school education because this period is one of great physical, social, psychological, and emotional change for students. The physical changes adolescents experience can greatly impact their emotional and social development (Caskey & Anfara, 2007). Developmentally responsive schools support the intellectual, social, and psychological needs of early adolescents.

Intellectual Development

Excellent schools understand that the adolescent years are a period of intellectual growth in which students begin to think more abstractly (National Forum, 2007). Adolescent students are able to accomplish more complex tasks and solve more difficult problems than before, and are beginning to increase their metacognitive capacity, or their ability to think about and reflect on their own thinking and thought processes. Along with this new ability to perform sophisticated analysis and reflection comes more frequent changes in student interests (Caskey & Anfara, 2007). Developmentally responsive schools are able to support intellectual development and the resulting changing student interests with the rigorous and engaging curriculum and instruction described above.

Social Development

Young adolescents need to feel a sense of belonging with others and seek approval from their peer groups (Caskey & Anfara, 2007). Adolescents emulate peers and need opportunities to form positive relationships with them. One way to enhance the cooperative experiences of peers is to develop small learning communities (National Forum, 2007) in which students can develop close support networks with both peers and adults. Additionally, collaborative groups for in-class activities and projects provide students with opportunities to participate in decision-making, to raise questions, and to reflect with peers (Evertson & Neal, 2006; National Forum, 2007). Incorporating these developmentally responsive techniques may require teachers to adjust their strategies away from traditional teacher-directed ones to those that accept the inclusion of student responsibility and other divergent roles so that management and instruction are integrated. Mertens (2006) also suggest that schools foster social development by providing experiences and adult role models through community service, extra-curricular programs, and career options.

Transitions to middle school. Perry (2005) provides several suggestions for creating smoother transitions between elementary and middle school. For example, having high-achieving high school students tutor middle school students can help with the new challenges that middle schoolers will face with the organizational skills required in a more complex school setting. Also, providing a peer mediation center at middle schools can help them deal with adolescent issues that students may not wish to discuss with their parents, such as bullying. However, parental engagement also must be encouraged at this crucial transition time. Parents should be reminded of strategies that can build their child's character and ways to promote positive behavior. Students in their final year of elementary school should be invited to attend a few middle school events or to a retreat that allows them to meet current middle school students, counselors, and administrators. Alternatively, middle schoolers should travel to elementary schools so that younger students are in an environment where they feel more comfortable to ask questions or raise concerns they have about middle school. In addition, middle schools can ease the transition by placing welcoming and supportive student helpers in the hall for the first weeks to help entering middle schoolers. Frequent interaction with principals and counselors in the halls and classrooms also allows new students to familiarize themselves with these resources.

Transitions to High School. Widespread transition programs have been shown to significantly lower school failure and dropout rates (Heller et al., 2003). Transition programs should include counseling, school visits, and summer courses so that students are introduced carefully to the new environment. Keeping a majority of the student's peer group intact also seems to have some effect on achievement for high-achieving students, but may have the opposite effect for low-achieving students. Underscoring the importance of middle school rigor is the finding that students who under-perform or who do not enroll in advanced classes in middle school tend to have difficulty making a successful transition to high school.

Psychological Development

Developmentally responsive middle schools provide opportunities for students to experiment with their identities and build self-esteem, both of which are crucial in the middle years (Caskey & Anfara, 2007). Students' development of autonomy, self-regulation, and sense of responsibility are additional components that must be addressed (Evertson & Neal, 2006). Mertens (2006) suggests including a comprehensive health program and collaborating with local health agencies to ensure school safety and to reduce violence and risky behaviors.

Social Equity

In addition to academic excellence and developmental responsiveness, the National Forum to Accelerate Middle-Grades Reform also cites the importance of overcoming variation in resources and outcomes related to race, class, gender, and ability. This type of social equity requires faculty to be both culturally and linguistically diverse, and requires responsiveness to the characteristics of students.

Changing Demographics

The National Center for Education Statistics (2007) reports an expected enrollment increase of 9 percent from 2004 to 2016 for public school students nationwide. For Texas, the expected increase is much greater at 28 percent. Over the past ten years, Texas public school enrollment has increased by 19 percent, particularly due to growth among the Hispanic population, which increased by over 46 percent statewide (Texas Education Agency, 2007). The number of Texas students identified as Limited English Proficient grew by 48 percent during that time period. Meanwhile, the population of public school students in the Austin region increased by nearly 36 percent, with the fastest pace of increase among Asian/Pacific Islanders (135%) and Hispanics (73%). White students grew at the slowest pace (13%) in the Austin region during the ten-year period from 1995-96 to 2005-06. At the same time, the Austin region experienced an increase of nearly 60 percent in the number of students identified as economically disadvantaged. Socially equitable schools must be prepared to meet the demands of the changing population.

Programs to Promote Social Equity

Heller et al. (2003) suggest that social equity requires extensive remedial programs, advanced courses, and instruction that promotes higher-order learning at all schools. Heller also reports that student tracking has not been found to positively affect achievement, and can actually undermine lower-tracked students' motivation and learning opportunities while perpetuating the cycles of socioeconomic and racial inequities. Positive Behavior Support (PBS) also can address social equity through the creation of systems and processes that meet the social needs of all students. Schools that implement PBS programs establish and actively teach clear behavior expectations, which provides students from varied cultural backgrounds a chance to share a common understanding of those expectations (Sugai & Horner, 2002; Luiselli, Putnam, Handler, & Feinberg, 2005).

Middle School Program and Initiative Examples

The following websites provide several examples of effective programs, initiatives and research findings:

- Excellent examples and models of a variety of initiatives and their corresponding research findings:
http://www.mgforum.org/Improvingschools/CSR/csr_intro.htm
- BEST: Building Engineering & Science Talent. This group assesses best practices in preK-12 math and science education in an attempt to keep women, minorities, and students with disabilities in science and engineering professions. They did an in depth evaluation of research-based programs by the BEST Blue Ribbon Panel and American Institutes of Research (AIR). Although no program earned the highest "verified" rating, the BEST panel reports a framework of design principles based on effective programs.
http://209.85.165.104/search?q=cache:tSB3l83qdJoJ:www.bestworkforce.org/pre-ssreleases/april29_2004_BEST.pdf+new+report+identifies+pre-K-12+programs&hl=en&ct=clnk&cd=1&gl=us&client=firefox-a

Middle Schools Identified as Exemplars

Schools to Watch: An Initiative of the National Forum to Accelerate Middle-Grades Reform

"Schools to Watch" is an initiative launched by the National Forum to Accelerate Middle-Grades Reform in 1999. Four schools were originally identified and the school tours of Freeport Intermediate School, Barren County Middle School, Jefferson Middle School and Thurgood Marshall Middle School can be accessed online at <http://www.schoolstowatch.org>.

Jefferson Middle School, Champagne, IL: The school gathers data, and reviews and uses evidence from many sources to make every important instructional decision. The school practices widespread and meaningful inclusion of special education students. Leadership excels in creating a shared vision of school improvement.

Thurgood Marshall Middle School, Chicago, IL: Teachers take responsibility for creating, adapting, and revising the curriculum to enhance student learning. Autonomous teacher teams lead the school, and the administration facilitates their leadership. The arts surround and support the academic curriculum.

Freeport Intermediate School, Freeport, TX: The bottom line of high performance is academic results. Freeport gets academic results. Everyone in the school shares a vision of academic success for all students. The school succeeds in a high-stakes testing environment. Relationships are warm and caring, in a personalized school environment. Students and parents like the school. Inclusion

is the norm. The school engages in continuous self-assessment and data-based decision-making.

Barren County Middle School, Glasgow, KY: A curriculum that emphasizes making connections across and between subjects and disciplines. Strong team orientation in which parents, teachers, community members, and business partners take responsibility for the education and development of students. A technology program that provides students with real-world experience and application of knowledge. Multiple services, during and after school for children, based on student need and designed with student input. Shared decision making and continuous self improvement that involves teachers, parents, and principal.

Schools To Watch now is a state-by-state program. Through the state Schools to Watch initiative, schools are identified across the United States that are well on their way to meeting the criteria for high performance. Three things are true of STW, high-performing middle-grades schools:

- They are academically excellent—these schools challenge all students to use their minds well.
- They are developmentally responsive—these schools are sensitive to the unique developmental challenges of early adolescence.
- They are socially equitable—these schools are democratic and fair, providing every student with high-quality teachers, resources, and supports.

To achieve this level of performance, high-performing schools establish norms, structures, and organizational arrangements to support and sustain their trajectory toward excellence. They have a sense of purpose that drives every facet of practice and decision-making.

Each year the National Forum invites state middle-grades associations, state departments of education, post-secondary institutions, and other collaborating organizations to join in expanding the STW program through a state application process. States have the opportunity to participate in a unique professional learning opportunity and identify middle-grades schools that are on a solid upward trajectory. Current STW states are Arkansas, California, Colorado, Georgia, Illinois, Kentucky, Michigan, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Utah and Virginia. Over 87 schools have been identified through 2006.

The Best Public Schools according to Texas Monthly

The December 2007 issue of Texas Monthly contained its annual article called The Best Public Schools, which were identified by the National Center for Educational Accountability (NCEA). NCEA (formerly Just for the Kids) looked at student test results for the past three years to create this year's higher-performing schools list. Using NCEA's own College and Career Readiness (CCR) benchmark as a measuring stick, the top 5 percent of schools are automatically included. The rest are added because they perform better than predicted using statistical analyses. For elementary schools, this means students in all grades perform better on the Texas Assessment of Knowledge and Skills (TAKS) than in similar elementary schools in the state. Middle

schools and high schools are on the list because their students' academic growth on the TAKS is higher than predicted based on their previous test scores. For more information, please visit just4kids.org.

The following schools that serve students in grades 6 to 8 were high performing in each of the four subject areas (Reading, Writing, Math, and Social Studies).

District	School
Clear Creek	Space Center Intermediate
Coppell	Coppell North
Coppell	Coppell West
Cypress-Fairbanks	Hamilton
Dallas	William B Travis Academy
Eanes	Hill Country
Eanes	West Ridge
Fort Bend	Fort Settlement
Fort Bend	Sartartia
Katy	Rodger and Ellen Beck Junior High
Lewisville	Clayton Downing
Lewisville	Lamar
North East	Barbara Bush
Plano	Frankford
Plano	Haggard
Plano	Renner
Plano	Robinson
Plano	Schimelpfenig
Plano	C M Rice
Round Rock	Canyon Vista
Spring Branch	Memorial

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