Research Brief

Components of School Capacity: Structures, Practices, and Perceptions

December 2005

Appalachia Educational Laboratory (AEL)
at

EDVANTIA™
Partners in education. Focused on results.

Edvantia is a nonprofit education research and development corporation, founded in 1966, that partners with practitioners, education agencies, publishers, and service providers to improve learning and advance student success. Edvantia provides clients with a range of services, including research, evaluation, professional development, and consulting.

For information about Edvantia research, products, or services, contact

EDVANTIA™

Edvantia was founded in 1966 as the Appalachia Educational Laboratory, Inc. (AEL); on September 1, 2005, AEL became Edvantia, Inc.

Edvantia is an equal employment opportunity/affirmative action employer.

Components of School Capacity: Structures, Practices, and Perceptions

This brief defines school capacity as the presence of characteristics needed to support the development of a thriving learning community. School cultural and attitudinal factors are incorporated in this definition (Kruse, Louis, & Bryk, 1995). Structural components also are included, in response to research showing the importance of school structures and policies to successful improvement initiatives (e.g., Fullan, 1991; Fullan & Miles, 1994; Hord, Rutherford, Huling-Austin, & Hall, 1987; Howley & Brown, 2001; Kruse, Louis, & Bryk, 1995; Newmann, King, & Youngs, 2001). Lacking these structures, practices, and perceptions, school staff may be less likely to nurture and sustain significant school improvement.

It should be noted that scant experimental or quasi-experimental research has been conducted on the characteristics, structures, or dispositions that lead some schools to be more successful at improvement efforts than others. Rather, the majority of the literature consists of case studies, survey research, and designs with pre- and posttesting. Other research involves participant observation, classroom observation, regression studies, and policy analysis. For now, these studies offer the best evidence available about what might predispose schools to improve. Readers of this brief may want to keep in mind this admittedly varied, but limited, research base.

School Structures

Massell (1998) refers to building capacity as translating high standards and incentives into effective instruction and strong student performance. Newmann, King, and Youngs (2001) contend that structural conditions, such as program coherence and alignment, coordinated curriculum, sufficient resources, and adequate time for staff to plan collaboratively and/or implement change, contribute to the likelihood that school reform will be undertaken with commitment. Moreover, school improvement efforts cannot be sustained without sufficient support from district and school policies and structures (Howley & Brown, 2001). Structural conditions, though often invisible or taken for granted, significantly shape how people behave, what they believe they (and their students) are capable of, and what they commit to do (Bourdieu & Passeron, 1990; deMarrais & LeCompte, 1999; Fullan, 1991; Mills, 1959; Riordan, 1997).

Program coherence. According to Newmann, King, and Youngs (2001), program coherence is a measure of the extent to which a school is programmatically integrated. The presence of many unrelated and unfocused improvement programs weakens organizational efficacy. Program coherence also encompasses the alignment and coordination of curriculum and instruction within and between grade levels (Corallo & McDonald, 2002; Newmann, Smith, Allensworth, & Bryk, 2001). Some research suggests that careful alignment of instruction with learning goals and assessments, as well as coordination within and across grade levels and subject areas, can produce improved student achievement on standardized tests (Mitchell, 1998, 1999; Schmoker & Marzano, 1999; Wishnick, 1989). One analysis of international studies reveals that

implementing and monitoring an aligned curriculum can produce a significant increase (on the order of approximately 31 percentile points) in student achievement (Marzano, 2000; Schmidt et al., 2001). Other studies indicate that curriculum coordination and alignment may diminish, if not entirely eliminate, such conventional predictors of student achievement as socioeconomic status, gender, race, and teacher effect (Elmore & Rothman, 1999; Mitchell, 1998, 1999; Wishnick, 1989). In a study of a low-performing rural school in Virginia, Nilsen (2000) noted that developing a balanced curriculum aligned with the state standards impacted the school's environment, teaching, and learning—results that contributed to the school's capacity for continuous improvement.

Structural support. One important condition for school improvement is adequate time for staff to plan, implement, experiment with, and evaluate their improvement initiatives (Howley & Brown, 2001; Howley-Rowe, 1999; Raywid, 1993). Teachers are better equipped to develop professionally if they have time during their workday to reflect, collaborate, and focus on their own learning. Such opportunities, moreover, are fundamental to the development of professional learning communities (Abdal-Haqq, 1996; Lashway, 1998). Some researchers argue that time is vital to the success of a school improvement undertaking because change proceeds in developmental phases; without time, reform has no chance to develop (Hord, Rutherford, Huling-Austin, & Hall, 1987).

Site-based change agents. Change agents can help schools prepare for change and help the staff focus on improving student achievement (Harris, 2002). Coggins, Stoddard, and Cutler (2003) conducted a case study research project of the Bay Area School Reform Collaborative (BASRC) to determine the value of reform coaches to helping schools build capacity. The research noted that coaches impacted teaching and learning by

- building capacity in the instructional staff to provide instructional leadership
- managing knowledge resources by connecting faculty to relevant research or organizing student data into a meaningful and useful formats
- coaching educators on topics related to instruction
- building capacity for instructional support and collaboration among teachers

The reform coaches researched practices that would support instructional improvement and helped teachers use the practices in the classroom. Additionally, they sought new instructional materials, connected with organizations that provide instructional support, and located opportunities for teacher professional development. The research concluded that the reform coaches serve as a bridge between a vision of improvement and its actual enactment.

Since 2001, Edvantia (formerly AEL) has worked with Tennessee to train and manage coaches, called Exemplary Educators (EEs), who assist low-performing schools in that state. Like the BASRC coaches, EEs help schools build capacity and perform similar tasks to those listed above. In general, analyses of student achievement gains in EE-assisted schools show increases comparable to or greater than those of typical and

high-performing Tennessee schools. In addition, schools where EEs have provided assistance for two years show greater gains than schools assisted for only one year (Craig, Butler, & Moats, 2005; Craig, Butler, Parker, et al., 2005a, 2005b).

Leadership. As Chirichello (1999) points out, the principal is key to establishing the climate of the school. Chirichello notes that collegial relationships between teachers and administrator need to be characterized by openness, cooperation, respect, and sincerity. Linda Lambert (1998) asserts that building capacity in schools embodies a new understanding of leadership. She uses the term constructivist
leadership to talk about "leadership as the reciprocal learning process that enables participants in a community to construct meaning toward a shared purpose" (p. 18). The processes of collaboration and collective responsibility must be institutionalized. Leadership becomes an action verb involving a redistribution of power within the learning community. Beliefs need to be translated into practice (Reitzug, 1994). As more staff assume responsibilities, the base of instructional leadership broadens, thus increasing the school's capacity to improve instruction. Sharing responsibility encourages undertaking and implementing an improvement plan that is based on identified goals and needs (Coggins et al., 2003).

Practices

Deprivatized practice. Louis and colleagues (1996) contend that deprivatized practice is pivotal to developing a school professional community. When faculty members observe one another, provide feedback, and serve as mentors or coaches, they tend to view teaching as a collaborative undertaking (Sarason & Lorentz, 1998). As a result, faculty experience less professional isolation and greater opportunity for learning from colleagues (Education Commission of the States, 1996). In terms of school capacity, this means serious change is more likely to take hold if faculty members are aided by norms or mechanisms that support collegial learning, critique, and cross-fertilization.

Equitable practice. Darling-Hammond says, "Successful education can occur only if teachers are prepared to meet rigorous learning demands and the different needs of students" (1997, p. 334). Schools are increasingly diverse organizations, with larger percentages of African American and Latino students. In addition, national attention is focused on increasing the academic achievement of racially/ethnically-defined youth and students of low socioeconomic status (Fortune, 2002; Schwartz, 2001). Schools equipped to teach their students equitably, fairly, and with understanding are equipped to make improvement equitably.

Differentiated instruction. Students in a classroom may hail from various communities, bring disparate skills and strengths, and have differing academic needs. Differentiating instruction involves varying content, processes, products, and learning environments to meet students' various needs (Tomlinson, 2000). Instruction that honors the linguistic and literacy styles of young children augments their reading skills (Vernon-Feagans, Hammer, Miccio, & Manlove, 2001) and, by extension, their learning of any

subject that requires literacy skills. Moreover, differentiated instruction has been shown to improve student achievement (Dahl, Scharer, Lawson, & Grogan, 1999; although see Rowan & Miracle, 1983, for an alternative view). Differentiated instruction accommodates students of various cognitive abilities (Tomlinson, 1999a) and accounts for the myriad ways in which we all learn (Tomlinson, 1999b). "A one-size-fits-all approach to classroom teaching is ineffective for most students and harmful to some," suggest Tomlinson and Kalbfleisch (1998, p. 1) in their analysis of brain research, because "to learn, students must experience appropriate levels of challenge" (p. 3).

Perceptions

Teacher efficacy. A school's ability to undertake significant school improvement work is closely bound to its teachers' attitudes, perceptions, expectations, and assessments. Teachers' shared beliefs about their collective ability to teach students effectively is, according to Goddard, Hoy, and Hoy (2000), a strong gauge of school capacity. Collective teacher efficacy is "an emergent group-level attribute, the product of the interactive dynamics of the group members. As such, this emergent property is more than the sum of the individual attributes" (p. 482). Teacher efficacy is linked to faculty behavior and is hypothesized (Goddard, 1998, 2002; Goddard, Hoy, & Hoy, 2000) and tentatively confirmed (Goddard, Hoy, & Hoy, 2002) to have an impact on student achievement.

Expectations. Expectations for student performance also constitute an important gauge of school capacity. These expectations are often shaped by stereotypical assessments based on race/ethnicity, socioeconomic status, gender, family structure, language, immigrant status, religion, transience, sexual orientation, and other contextually significant social characteristics (Bourdieu & Passeron, 1990; deMarrais & LeCompte, 1999; McLeod, 1987; Ogbu, 1983; Paley, 1979; Riordan, 1997; Willis, 1981). For example, teachers who hold low expectations for certain students may treat them differently than students perceived to be more capable. Such differential treatment, which is very different from differentiated instruction, results in some students having fewer opportunities to learn challenging material, less time to answer questions or complete assignments, and less encouragement and praise (deMarrais & LeCompte, 1999; Lumsden, 1997; McLeod, 1987; Willis, 1981).

Summary

The literature on school improvement suggests that a school's capacity for improvement can be supported by coherent structures, constructive teacher and leadership practices, and positive staff perceptions of their own efficacy and that of their students. Sufficient planning time and resources, a coordinated instructional program, teacher commitment to educating diverse students, and collective professional efficacy are among those characteristics the literature proposes to be linked with the likelihood that schools may be able to pursue improvement strategies effectively. Together, these

characteristics suggest four areas or dimensions that contribute to building capacity: (1) bringing focus, (2) leading change, (3) developing accountability, and (4) creating community.

This research brief is based on the literature review "A Review of the Literature About School Capacity," which is included in *Measure of School Capacity for Improvement (MSCI) User Manual and Technical Report,* by Georgia K. Hughes, Lisa D. Copley, Caitlin W. Howley, and Merrill L. Meehan; and on literature reviews conducted for Edvantia by Joy Runyan and Michael T. Carter.

References

Abdal-Haqq, I. (1996). *Making time for teacher professional development*. ERIC Digest. Retrieved August 1, 2002 from http://www.ericsp.org/pages/digests/making_time_teacher_pro_dev_95-4.html

Bourdieu, P., & Passeron, J. (1990). *Reproduction in education, society and culture* (2nd ed.). Newbury Park, CA: Sage Publications.

Chirichello, M. (1999). *Building capacity for change: Transformational leadership for school principals.* Paper presented at the 12th Annual International Congress for School Effectiveness and Improvement, San Antonio, TX. (ERIC Document Reproduction Service No. ED432037).

Coggins, C. T., Stoddard, P., & Cutler, E. (2003, April). *Improving instructional capacity through school-based reform coaches.* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL. (ERIC Document Reproduction Service No. ED478744).

Corallo, C., & McDonald, D. H. (2002). *What works with low-performing schools: A review of research.* Lanham, MD: Scarecrow Education-AEL.

Craig, J., Butler, A, & Moats, S. (2005). *An analysis of the attributes and work of Exemplary Educators: Summary of findings.* Charleston, WV: AEL.

Craig, J., Butler, A., Parker, L., Chadwick, K., Wood, C. & Garrett, J. (2004a). *An initial report on the effects of Tennessee's Exemplary Educators on High Priority schools.* Charleston, WV: AEL.

Craig, J., Butler, A., Parker, L., Chadwick, K., Wood, C. & Garrett, J. (2004b). *Key features of Tennessee's Exemplary Educators.* Charleston, WV: AEL.

Craig, J., Butler, A., Parker, L., Chadwick, K., Wood, C. & Garrett, J. (2005a). *Gains in achievement for High Priority elementary and middle schools, school year 2003-2004: Preliminary report of findings.* Charleston, WV: AEL.

Craig, J., Butler, A., Parker, L., Chadwick, K., Wood, C., & Garrett, J. (2005b). *Status report review and analysis: Summary of findings.* Charleston, WV: AEL.

Dahl, K. L., Scharer, P. L., Lawson, L. L., & Grogan, P. R. (1999). Phonics instruction and student achievement in whole language first-grade classrooms. *Reading Research Quarterly, 34*(3), 312-341.

Darling-Hammond, L. (1997). Restructuring schools for student success. In A. H. Halsey, H. Lauder, P. Brown, & A. S. Wells (Eds.), *Education: Culture, economy, and society* (pp. 332-337). New York: Oxford University Press.

deMarrais, K. B., & LeCompte, M. D. (1999). *The way schools work: A sociological analysis of education.* New York: Longman.

Education Commission of the States. (1996). *Lessons learned: How collaboration contributes to school improvement.* Denver, CO: Author.

Elmore, R. F., & Rothman, R. (1999). *Testing, teaching, and learning: A guide for states and school districts.* Washington, DC: National Academy Press.

Fortune, A. (2002). Closing the achievement gap: A look ahead. *Gaining Ground: Achieving Excellence in High-Poverty Schools, 4*(1). Washington, DC: Council of Chief State School Officers.

Fullan, M. G. (1991). *The new meaning of educational change.* New York: Teachers College Press.

Fullan, M. G., & Miles, M. B. (1994). Getting reform right: What works and what doesn't. *In Changing education: Resources for systemic change* (pp. 211-218). Washington, DC: U.S. Department of Education.

Goddard, R. (1998). *The effects of collective efficacy on student achievement in urban public elementary schools.* Doctoral dissertation, Ohio State University, Columbus.

Goddard, R. (2002). A theoretical and empirical analysis of the measurement of collective efficacy: The development of a short form. *Educational and Psychological Measurement, 62*(1), 97-110.

Goddard, R., Hoy, W. K., & Hoy, A. W. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Educational Research Journal, 37*(2), 479-507.

Goddard, R., Hoy, W. K., & Hoy, A. W. (2002, April). *The effects of collective efficacy on student achievement in urban public elementary schools.* Paper

presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Harris, A. (2002, April). *Building capacity for school improvement.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA. (ERIC Document Reproduction Service No. ED466034)

Hord, S. M., Rutherford, W. L., Huling-Austin, L., & Hall, G. E. (1987). *Taking charge of change.* Alexandria, VA: Association for Supervision and Curriculum Development.

Howley, C., & Brown, P. (2001, April). *To continue, press on: Sustaining school improvement.* Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA.

Howley-Rowe, C. (1999). *Engaging with school improvement: Initial and sustained involvement in the Quest network.* Charleston, WV: AEL.

Kruse, S., Louis, K. S., & Bryk, A. (1995). Let's build teachers' professional community. WCER Highlights, 7(1). Retrieved August 12, 2002, from http://www.wcer.wisc.edu/publications/WCER_Highlights/Vol.7_No.1_Spring_1995/Teachers_prof_community.html

Lambert, L. (1998). How to build leadership capacity. *Educational Leadership, 55*(7), 17-19.

Lashway, L. (1998). *Creating a learning organization.* ERIC Digest. Eugene, OR: ERIC Clearinghouse on Educational Management. Retrieved August 1, 2002, from http://eric.uoregon.edu/publications/digests/digest121.html

Louis, K. S., Marks, H. M., & Kruse, S. (1996). Teachers' professional community in restructuring schools. *American Educational Research Journal, 33*(4), 757-798.

Lumsden, L. (1997). *Expectations for students.* ERIC Digest. Eugene, OR: ERIC Clearinghouse on Educational Management. Retrieved August 1, 2002, from http://eric.uoregon.edu/publications/digests/digest116.htm

Marzano, R. J. (2000). *A new era of school reform: Going where the research takes us.* Aurora, CO: Mid-continent Research for Education and Learning.

Massell, D. (1998). *State stratagies for building capacity in education: Progress and continuing challenges.* CPRE Research Report Series RR-41. Philadelphia: Consortium for Policy Research in Education. (ERIC Document Reproduction Service No. ED426490)

McLeod, J. (1987). *Ain't no makin' it: Leveled aspirations in a low-income neighborhood.* Boulder, CO: Westview Press.

Mills, C. W. (1959). *The sociological imagination.* New York: Oxford University Press.

Mitchell, F. (1999, April). *All students can learn: Effects of curriculum alignment on the mathematics achievement of third-grade students.* Paper presented at the annual meeting of the American Educational Research Association, Montreal, Quebec, Canada.

Mitchell, F. (1998). *The effects of curriculum alignment on the mathematics achievement of third-grade students as measured by the Iowa Test of Basic Skills: Implications for educational administrators.* Unpublished doctoral dissertation, Clark University, Georgia.

Newmann, F. M., King, M. B., & Youngs, P. (2001, April). *Professional development that addresses school capacity: Lessons from urban elementary schools.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Newmann, F. M., Smith, B., Allensworth, E., & Bryk, A. S. (2001). *School instructional coherence: Benefits and challenges.* Chicago, IL: Consortium on Chicago School Reform.

Nilsen, K. L. (2000). *Implementing the aligned and balanced curriculum (ABC): Building capacity for continuous improvement.* Charleston, WV: AEL. (ERIC Document Reproduction Service No. ED450994)

Ogbu, J. (1983). Minority status and schooling in plural societies. *Comparative Education Review, 27*(2), 168-90.

Paley, V. G. (1979). *White teacher.* Cambridge, MA: Harvard University Press.

Raywid, M. A. (1993). Finding time for collaboration. *Educational Leadership, 51*(1), 30-34.

Reitzug, U. C. (1994). A case study of empowering principal behavior. *American Educational Research Journal, 31*(2), 283-307.

Riordan, C. (1997). *Equality and achievement: An introduction to the sociology of education.* New York: Longman.

Rowan, B., & Miracle, A. W., Jr. (1983). Systems of ability grouping and the stratification of achievement in elementary schools. *Sociology of Education, 56*(3), 133-144.

Sarason, S. B., & Lorentz, E. M. (1998). *Crossing boundaries: Collaboration, coordination, and the redefinition of resources.* San Francisco: Jossey-Bass.

Schmidt, W. H., McKnight, C. C., Houang, R. T., Wang, H. C., Wiley, D. E., Cogan, L. S., et al. (2001). *Why schools matter: A cross-national comparison of curriculum and learning.* San Francisco: Jossey-Bass.

Schmoker, M., & Marzano, R. J. (1999). Realizing the promise of standards-based education. *Educational Leadership, 56*(6), 17-21.

Schwartz, W. (2001). *Closing the achievement gap: Principles for improving the educational success of all students.* ERIC Digest. New York: ERIC Clearinghouse on Urban Education. Retrieved March 13, 2002, from http://eric-web.tc.columbia.edu/digests/dig169.html

Tomlinson, C. A. (1999a). *The differentiated classroom: Responding to the needs of all learners.* Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C. A. (1999b). Mapping a route toward differentiated instruction. *Educational Leadership, 57*(1). Retrieved August 19, 2002, from http://www.ascd.org/pdi/demo/diffinstr/tomlinson2.html

Tomlinson, C. A. (2000). *Differentiation of instruction in the elementary grades.* ERIC Digest. Champaign, IL: ERIC Clearinghouse on Elementary and Early Childhood Education. Retrieved January 11, 2002, from http://ericir.syr.edu/plweb-cgi/obtain.pl

Tomlinson, C. A., & Kalbfleisch, M. L. (1998). Teach me, teach my brain: A call for differentiated classrooms. *Educational Leadership, 56*(3). Retrieved August 19, 2002, from http://www.ascd.org/pdi/demo/diffinstr/tomlinson.html

Vernon-Feagans, L., Hammer, C. S., Miccio, A., & Manlove, E. (2001). Early language and literacy skills in low-income African American and Hispanic children. In S. Neuman and D. Dickinson (Eds.), *Handbook of early literacy research* (pp. 192-210). New York: Guildford Press.

Willis, P. (1981). *Learning to labor: How working class kids get working class jobs.* New York: Columbia University Press.

Wishnick, K. T. (1989). *Relative effects on achievement scores of SES, gender, teacher effect and instructional alignment: A study of alignment's power in mastery learning.* Unpublished doctoral dissertation, University of San Francisco, California.