

Ohio Special Education Research Project Executive Summary

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Ohio Special Education Research Project

Ohio Coalition for the Education of Children with Disabilities

Ohio Coalition for the Education of Children with Disabilities

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Ohio Special Education Research Project
Executive Summary

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Identifying Successful Practices for Students with Disabilities in Ohio Schools:

Final Report

OCECD Special Education Research Project: Executive Summary

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INTRODUCTION

This Ohio Special Education Research Project (OCECD Research Project) is funded by the Ohio Department of Education, Office for Exceptional Children (ODE-OEC) to the Ohio Coalition for the Education of Children with Disabilities (OCECD). The OCECD is a statewide nonprofit organization that serves families of infants, toddlers, children, and youth with disabilities in Ohio and agencies that provide services to them. The purpose of the Coalition, which represents more than 40 parent and professional disability organizations, is to ensure that every Ohio child with special needs receives a free, appropriate, public education in the least restrictive environment.

The goal of the OCECD Research Project is to enhance the understanding of educational strategies that are commonly found in schools with successful track records in the education of students with disabilities. The project examined a stratified sample of public school districts and public community schools in Ohio that serve students with all types of disabilities at the elementary, middle, junior high, and/or senior high school levels.

ODE-OEC, in collaboration with OCECD, outlined the context, purpose, and methods for the current study. OCECD contracted with a group of researchers to conduct the study. The selected research team brings extensive experience with large scale evaluation studies, education policy and best practices, as well as in-depth understanding of the current and emerging system of education in Ohio.

The timeline for the current study extended from the formal notification of award on October 1, 2012, to the completion of the study, in June 30, 2013. Established public school district typologies were used to identify sample sites with similar demographic and geographic characteristics, along with performance data on statewide assessments. Similar criteria were used to select public charter/community school sites.

The OCECD Research Project was conducted in two stages. The first stage, which spanned from October to December 2012, included a review of research on educational practices related to improved academic performance for students traditionally at risk for academic failure; that is, students with disabilities and economically disadvantaged students. The findings from the literature review were then used to build the conceptual framework for the second stage of the study. This stage comprised a field study conducted between January and May of 2013 with two

public charter/community schools and 10 public school districts that represented 5 of the 7 school district typologies in Ohio.

This *Executive Summary* synthesizes the information that is detailed in two other reports: *Evidence-Based Practices in Special Education: A Review of the Literature* and *Identifying Successful Practices for Students with Disabilities in Ohio Schools: Final Report*.

The *Executive Summary* provides an overview of the methods used in the study and its findings. The report includes four chapters and an appendix:

- Stage 1: Literature Review
- Stage 2: Field Study
- Cross-Typology
- Conclusions and Recommendations.
- Appendix A provides a list of resources for implementation of strategies highlighted in the report.

This report was written for a diverse audience that includes educators, advocates, policy makers, and families. As a note of caution, any attempt to synthesize information brings the risk of oversimplification and sometimes misunderstandings. Therefore, the evaluators recommend the reading of the larger reports for those who are left with questions or are interested in further exploration of specific aspects of the study.

STAGE 1: LITERATURE REVIEW

Method

Purpose: The purpose of the literature review was to identify research related to best practices in special education in American public, private, and charter schools, from kindergarten through high school. The ultimate goal of the review was to define the conceptual framework for the second stage of the OCECD Research Project.

Process: The review was conducted within a three-month time span, from October to December 2012. The search targeted articles in peer-reviewed research journals, technical documents, and books written in the past 12 years. Research related to best practices in general education, with a focus on economically disadvantaged students also was included for two reasons. First, many students with disabilities come from low socioeconomic backgrounds. Second, both groups struggle academically and exploration of successful strategies for the two groups adds to the generalizability of the findings and feasibility of replication.

Definition: The terms *high-performing* and *low-performing* were adopted directly from the literature. The most frequently used method by which to rate performance relied on results from statewide assessments, sometimes controlled for school demographics and location. Other strategies to rate performance included: comparison between potential and actual growth; use of state definitions of high-performing schools; and adoption of multiple indicators to develop a district (or school) performance index.

Criteria: The documents were screened for inclusion according to three criteria. First, the review covered only documents that reflected research, although no limitations were imposed on the quality or types of research. Second, the documents had to provide information on the criteria used to define success or high-performance and for what groups of students. Third, the documents were required to describe the practices that could explain successful performance.

Selected documents: From the 176 studies reviewed, 19 documents were selected. Sixteen studies used mixed methods that included interviews, site visits, and surveys. One study was a review of literature, another used an audit process to collect and examine data, and a third reviewed the status of special education in three large cities. Three documents compared practices between high-performing and low-performing schools.

The selected studies examined practices adopted in schools located in Alabama, California, Colorado, Florida, Georgia, Illinois, Indiana, Kentucky, Massachusetts, North Carolina, Tennessee, Texas, and Washington. Five of the studies involved Ohio schools.

Seven studies focused on schools that were succeeding in improving the academic performance of students with disabilities (Group A studies). Group A studies included: Ellis, Gaudet, Hoover, Rizoli, and Mader (2004); Edmonds and Spradlin (2010); Huberman and Parrish (2001); Huberman, Parrish, Arellanes, Gonzalez, and Scala (2012); Mandlawitz (2003); Ohio State University (OSU), Center for Special Needs Population (2005); and Telfer (2011).

The remaining 12 studies examined high-performing schools that served a majority of economically disadvantaged students (Group B studies). Group B studies included: Anderson and DeCesare (2008); Bowers (2008); Craig, Butler, Cairo, Wood, Gilchrist, Holloway, and Moats (2005); Dailey, Fleischman, Gil, Holtzman, O'Day, and Vosmer (2005); Hagelskamp and DiStasi (2012); Kannapel and Clements (2005); Ragland, Clubine, Knight, Schneider, and Smith (2001); RMC Research Corporation (2003); Robinson, Stempel, and McCree (2005); Shannon and Bylsma (2007); Suffren and Wallace (2010); and William, Kirst, and Haertel (2005).

Findings: Students with disabilities

The seven Group A studies were examined individually and findings were organized in six categories that emerged from the analysis: requirements from the *Individuals with Disabilities Education Act* (IDEA), defining principles, infrastructure, school organization, external supports, and instructional strategies. Findings from the diverse studies were then compared for commonalities.

Collaboration among teachers, particularly among general and special education teachers, was a common finding in all seven studies, although only one mentioned that the teachers had scheduled planning time to collaborate. Ongoing use of student assessments to plan and modify instruction was a finding in five (71%) of the Group A studies. Findings common to four (57%) of the studies included: high expectations for all stakeholders (administrators, teachers, students, and sometimes families), a shared sense of responsibility for student learning, and access to core curriculum. It is important to observe that access to core curriculum was a finding even in schools (and districts) that were not identified as having full inclusion.

Findings common to three of the Group A studies included: school administrators as instructional leaders, ongoing professional development tailored to teachers' needs, and districts with policies focused on hiring and maintenance of high quality personnel. Three studies also observed that not one specific supplemental program or instructional strategy was found to be associated to high-performing schools. Table 1 summarizes the findings and the number of studies that reported those findings.

Table 1. Summary of Findings on Students with Disabilities

Categories	Findings	# of Studies
IDEA requirements	Early identification	2
	Focus on facilitating transition	2
	Use of inclusion	3
Defining principles	High expectations for all and shared responsibility for achievement	4
Infrastructure	Creative use of funding	1
	New/renovated buildings	1
School organization	Clear behavior expectations and positive reinforcement	2
	Leadership focused on instruction but no specific style	3
	Teacher collaboration (general education and special education)	7
	Professional learning communities	2
	Guaranteed planning time to collaborate	1
	Ongoing professional development tailored to teachers' needs	3
External supports	District policies focused on hiring and maintaining high quality personnel	3
	District staff supports instruction at school level	2
	Family involvement	1
	Business and higher education partnerships	2
Instructional strategies	Access to core curriculum for all students	4
	Ongoing assessments with the use of data to inform instruction	5
	No specific support/supplemental programs	3

Note. Total number of studies = 7.

None of the Group A studies used a comparison design. Consequently, findings from these studies cannot be considered as exclusive of high-performing schools or districts.

Findings: Students from low socioeconomic backgrounds

Three findings were common to more than half of the 12 Group B studies: high expectations shared by all stakeholders (administrators, teachers, students, and families); administrators as instructional leaders; and the use of ongoing student assessments to plan and modify instruction. Six studies also highlighted teacher collaboration and professional development tied to teachers' needs. Table 2 summarizes these findings.

Table 2. Summary of Findings on Economically Disadvantaged Students

Categories	Findings	# of Studies
Defining principles	High expectations shared by all	12
Infrastructure	Presence of updated technology	2
School organization	Clear rules of conduct consistently enforced in positive ways	3
	Administrators as instructional leaders	10
	Shared leadership, creative leadership	4
	Collaboration among teachers	6
	Teacher support through coaching and mentoring	3
	Professional development tied to teachers' needs	6
External supports	Partnerships with businesses, colleges, and universities	2
	Families and communities support schools	5
	Family involvement is not essential	2
	District has little or negative influence on school achievement	2
	District has strong influence on school achievement	4
Instructional strategies	Curriculum alignment with state standards	5
	Ongoing assessments with the use of data to inform instruction	10
	Individualized attention to students who are struggling academically	4
	Attention to time in instruction	3
	Extra academic supports for needy students (after school, etc.)	3

Note. Total number of studies = 12.

Three Group B studies compared practices adopted by high-performing and low-performing schools. In the study by Kannapel and Clements (2005), high-performing schools, different from the low-performing ones, were found to offer a nurturing environment of high expectations for all students, ensure the alignment of curriculum to standards and assessments, and plan for efficient use of resources and instructional time.

The study by Robinson, Stemple, and McCree (2005) highlighted a greater focus on preparing students for college and careers at the high-performing schools, and low-performing

focused on preparation of students for no more than high school graduation. Additionally, high-performing schools were more likely to provide all students with access to college preparatory courses and create a system of early warning signs and mandatory supports to ensure that struggling learners could succeed in those courses.

William, Kirst, and Haertel (2005) found that high-performing schools focused on implementation of standards-based curricula and programs and used vertical and horizontal curricula alignment. High-performing schools also provided teachers with sufficient and up-to-date instructional materials. Common to all three studies was the finding that in high-performing schools, administrators and teachers maintain ongoing analysis of student academic performance data to inform instruction.

Findings from Group A and Group B studies

Table 3 lists side by side the most frequent findings from Group A and Group B studies. To be included in the table, findings had to be mentioned in at least half of the studies in each group or be a finding in at least 2 of the 3 studies that had comparison groups. Findings from Telfer (2011) are not included as the study focuses on a single factor (use of data).

Table 3. Comparison of Findings

Group A: Students with Disabilities		Group B: Economically Disadvantaged Students	
Findings	%*	Findings	%*
Teacher collaboration	100	Teacher collaboration	50
High expectations for all	67	High expectations for all	100
Access to core curriculum	67	Alignment of curriculum and standards	**
Ongoing assessments/data to inform instruction	67	Ongoing assessments/data to inform instruction	83
Administrators as instructional leaders	50	Administrators as instructional leaders	83
Ongoing professional development tailored to teachers' needs	50	Ongoing professional development tailored to teachers' needs	50
Districts focused on hiring and maintaining high quality personnel	50		
Number of studies in the group	6	Number of studies in the group	12

Note. *Percentage of studies that included those findings;
 **Five studies, two of which were comparison studies

As suggested by the table, five characteristics of high-performing schools were frequently found in both groups of studies (A and B): schools encourage collaboration among all teachers; administrators and teachers share a vision of high expectations for all stakeholders; school administrators, regardless of leadership style, maintain a focus on teaching and learning; and professional development is ongoing and tailored to the needs of teachers.

Findings related to district support were contradictory for Group B studies but appeared more relevant when students with disabilities were the focus (Group A studies). Access to core curriculum, as opposed to the use of adapted curricula, was a common finding for the Group A studies. Comments regarding curriculum from Group B studies highlighted the need for alignment between curriculum and standards as well as vertical (across grade levels) and horizontal (within grade levels) alignment.

In addition to identifying the assets of high-performing schools, the literature reviewed the challenges faced by them. Challenges raised in the Group A studies included: lack of funding that threatens the delivery of services; personnel being stretched too thin and dealing with a plethora of paperwork; lack of long-term commitment from districts to programs (i.e., changing programs before seeing results); and the growth in the number of students with disabilities who also have limited English proficiency.

In the Group B studies, mobility was the major challenge. Mobility includes both student and personnel mobility. Each year, schools receive a new group of students who bring different needs that must be addressed by the schools. Therefore, strategies that may be successful with one cohort may not work with another group, and the process of finding solutions is ongoing. Personnel mobility is another challenge, as schools and districts must find ways to maintain continuity of leadership and high quality teaching despite ongoing loss of personnel.

Defining the Conceptual Framework

The review of research highlighted factors that appear connected to high-performing schools for students at risk of academic failure. These factors included the presence of a well-defined and encompassing vision accompanied by strategies that support the vision's implementation. These support strategies involved faculty (hiring practices, professional development, induction processes), curriculum and instruction (curriculum alignment with standards, inclusion, co-teaching, supports for struggling students), and external supports (school

district/sponsors, families, and communities). Federal and state policies defined the platform on which educational practices are implemented.

From the literature review, a three-dimensional framework was defined that delineated what to collect (1st dimension), from whom (2nd dimension), and at what grade level (3rd dimension). The conceptual framework guided the development of the data collection instruments, the analysis of the data collected from the field, and the presentation of findings. Figure 1 summarizes the framework’s components.

Figure 1: Elements of the three-dimensional conceptual framework

1st Dimension: Content		2nd Dimension: Roles		3rd Dimension Grade Level
Foundations	Subcomponents	General	Specific	
Vision	Perspectives	Superintendent / Executive Director	Special Education Director	High
	Contributors Challenges Leadership continuity			
Structure	Funding	Curriculum Director	Intervention Specialist	Middle/Junior
	Infrastructure Organization State role			
Teachers	Hiring practices	Treasurer	Auxiliary services	Elementary
	Professional development Supports Collaboration			
Instruction	Identification and Placement	School administrators	Teachers	
	Intervention structure Role of special educator Transitions Technology Specific strategies (programs) Use of data			
Supports	Behavior management			
	Continuum of services Parental involvement Community involvement			

STAGE 2: FIELD STUDY

Methods

Purpose: As requested by OCECD, the purpose of the field study was twofold: (1) to provide insight into why geographically and demographically similar local education agencies (LEAs) are achieving substantially different levels of academic progress for students with disabilities; and (2) to provide evidence on practices related to improved academic achievement for students with disabilities that inform ODE's and OCECD's initiatives. The term *practice* is here adopted to describe procedures, initiatives, and/or strategies employed by schools and school districts in their mission to educate Ohio students.

Sampling: The selection of school districts and community schools that were to participate in the study was conducted by ODE-OEC. The sample was stratified by typologies, with the exclusion of small LEAs that do not serve students with disabilities and large urban districts for which a district-level analysis was not recommended. The high/low-performance definition was based on district-level average scaled scores on the 2012 Ohio Achievement Assessment (OAA) and Ohio Graduation Tests (OGT) for reading and mathematics. Average scores were calculated for students in general education and students with disabilities. The difference or gap between the average scaled scores for the two groups of students was then computed, and within each typology, the districts were ranked according to the achievement gap.

The list was reexamined with results from three years of OAA and OGT to test whether performance was a one-time event that resulted from factors extraneous to the LEAs. No changes in ranking were observed. The academic gap also was reexamined to discern its meaning. Small academic gaps may reflect an overall low achievement whereby all students are performing at low levels. It may also reflect the presence of inequities, whereby one group of student performs quite well while another group struggles academically. The review of the gap indicated that students with disabilities in LEAs with small academic gaps also were achieving on average above their peers in schools with large gaps, except for Typology 6. In this case, the district with the smallest gap had the lowest average performance for all students. Therefore, the average performance of students with disabilities, rather than gap, defined the high/low terminology used in the study.

Public charter schools (also called community schools) are not clustered in typologies. The list of potential participants was provided by the ODE's Office of Community Schools, following similar criteria.

Final sample: One charter school declined to participate but was replaced by another equally ranked charter. Both sites in Typology 1 declined to participate after a long process of indecision, leaving no time to locate replacements. The final sample included two public charter schools and 10 LEAs clustered in 5 of the 7 typologies, as follows:

Typology 2: Rural/agricultural—small student population, low poverty, low to moderate median income;

Typology 3: Rural/small town—moderate to high median income;

Typology 4: Urban—high poverty, low median income;

Typology 6: Urban/suburban—high median income;

Typology 7: Urban/suburban—very low poverty, very high median income.

Identification: To maintain participants' privacy, the school districts and charters are identified in the reports by a code that indicates their typology and ranking. For instance, CH is a charter school that shows high performance for students with disabilities, and 2L is an LEA in typology 2 that has low performance for students with disabilities.

Study Design: The study used a comparative case study approach (Yin, 2009). A case study design cannot establish causality between academic success and teaching practices. However, by collecting the same data from participants on the two ends of the achievement spectrum, the study identifies those practices that are common to all schools, regardless of achievement, in contrast to practices that are exclusive to schools that attain academic success.

Instruments: Interview protocols, the school walkthrough rubric, and the survey questionnaire were developed based on the conceptual framework informed by the literature review. The instruments were tested in a visit to a volunteer school district that did not participate in the study.

Data collection: From March through April 2013, each site in the final sample received a one- to three-day visit from the researchers, depending on the number of schools. The visits included guided walkthrough observations of schools for each grade level (elementary, middle, junior high, and high). A total of 27 schools were visited, representing 10 school districts and 2 community schools. Interviews were conducted with 97 school personnel, including 33

representatives of LEA's central office or charter school sponsors, 23 student support personnel (counselors, psychologists, speech-language therapists), and 41 school administrators and teachers. Special education and general education teachers from the selected LEAs also participated in a survey that explored the conceptual framework components as implemented at the classroom level. Invitations were sent to 814 teachers across the 12 sites and 395 participated for an overall response rate of 49%. Information from the interviews and observations were triangulated with the survey results to provide an all-inclusive perspective on the participating schools and school districts.

Data analysis: All data collected were entered in a master project database. To avoid potential bias acquired during the site visits and interviews, two researchers who had not participated in the site visits coded the data. Moreover, to avoid bias that might have resulted from previous knowledge of achievement levels, for the two initial rounds of data reduction, the researchers were kept purposely unaware of ranks. The analysis, following the conceptual framework, focused on: vision, infrastructure; teaching (hiring practices, professional development, and supports); learners (identification, Least Restrictive Environment, continuum of services, transitions, behavior management); classroom strategies (co-teaching, curriculum alignment, use of data, technology, student supports); family and community involvement; and similarities and differences within typologies. The presence of common findings within each typology led to a cross-typology analysis.

Limitations: The findings presented in this report should be interpreted with three considerations in mind. First, the research is descriptive in nature and does not propose causal relationships between specific practices and student outcomes. Second, reflecting the sampling process, findings are Ohio-specific, as only Ohio education agencies are represented. Third, data for this study were collected during a two-month period from select LEAs and charters across the state. Thus, the data represent a snapshot in time within the districts' and schools' much lengthier trajectories. At the time of the study, all LEAs and charters were, in one way or another, embarking on significant changes to address the Ohio's Learning Standards initiative.

Following is a brief description of findings from each typology. Table 4, at the end of the chapter, summarizes the information by presenting only those factors that showed contrast between high and low-achieving sites. For a detailed description of findings within each typology, readers should refer to the *Final Report*.

Community/Charter Schools

The two public charter schools included in the study are located in impoverished urban areas in two counties. In both schools, more than 80% of the students come from minority backgrounds, and 90% are classified as economically disadvantaged. Both sites have similar percentages of students with disabilities (about 20%). The schools serve students from elementary to middle grades (K-8).

Similarities: Interviewees from both sites indicated a focus on compliance with IDEA requirements. Challenges to attain the vision included low teacher salaries leading to high teacher turnover, teachers' resistance to change their practices, and low family involvement. Collegiality among teachers was seen as a contributor at both sites.

I make sure that we are in compliance. . . . I come in and audit the files once a year. I would like to do it twice a year, but it's been a crazy year so at least once. . . . Just basically try to keep us in compliance with everything. *CL administrator*

Both schools provide mentoring for newly hired teachers and professional development (PD) to faculty, with the top-ranked (CH) site using a professional learning community system. Responses from the survey suggested that teachers from both sites are quite satisfied with their PD opportunities and the supports they receive from the administration. Both schools contract for specialized services and offer similar strategies to facilitate the transition of students as they come into the schools. Both schools also offer supports for parents as students leave for high school. None of the schools were technology-rich but were moving toward expansion of technology.

Differences: The higher-ranked (CH) site uses a well-structured, multitiered system of intervention with a preventive approach. The lower-ranked site (CL) was adopting Response to Intervention (RtI), but the process was still incipient. Likewise, both sites opted for inclusion of students with disabilities into general classrooms, but levels of implementation were diverse. The CH was introducing co-teaching, and the CL was mostly providing specialized interventions using a pull-out system.

CH teachers use short-cycle assessments to assess student performance and offer an extra hour of instruction daily for struggling students. CL administrators indicated that their teachers were being trained in the use of formative assessments, and the site expects to have a process in place quite soon. At this point, the focus is on the so-called bubble students, that is, students who

are close to achieving proficiency in the state assessments and not necessarily students with disabilities.

The CH has been implementing Positive Behavior Intervention and Supports (PBIS) for some time. Information from the CL site is contradictory. Some interviewees stated that there are no school-wide behavioral intervention programs, and other interviewees and survey participants mentioned the use of PBIS.

Summary: Findings suggest that the two sites are looking toward the same goals and adopting similar strategies that include preparation for the Ohio Learning Standards, use of data to differentiate instruction, adoption of the Ohio Improvement Process (OIP), and multitiered systems of intervention. The main difference is the stage of implementation. CH is farther along in the implementation process. Many of the CL administrators are new, particularly in the special education area, and the site is only starting a reform process. These different stages of a similar trajectory offer a good example of what schools can attain if reforms are given time to solidify.

Two strategies used by the high-performing site should be mentioned. One is the parent-volunteer requirement, which is bringing parents into the school in active roles. The school requires parents to provide 20 hours of volunteer services each year. The service can be provided at the school building or at the parents' home, when needed. In contrast, 2L interviewees described many initiatives that have been implemented to bring parents into the schools, such as school dinners, presentations, and raffles, but without success.

I feel like general education teachers don't quite understand what we do. And by the same token, I don't think we fully understand what [they] have to do. So there's huge disconnect.
CL special education

The second potentially successful strategy is the mentor system. The CH uses a one-on-one mentor system for students with disabilities. Mentors are assigned from a teaching cadre at the school. The same mentor is available to the student every day and throughout the year, even during test time. The mentors provide academic support and work on accommodations and modifications. This daily mentor may be the key for the success of students with disabilities on the state assessments. The mentors are instrumental in ensuring that students have appropriate accommodations and provide the sense of confidence needed by students who struggle academically.

Typology 2

Typology 2 includes public school districts that are located in rural settings, within low to moderate median income areas. The 2H had twice the number of students of the 2L (900 vs. 400,

Our number one student in our class this year [the valedictorian] is a student with disabilities. . . . That says a lot about our students with disabilities, about what they've overcome and how strong they are.
2L administrator

respectively). Alternatively, the 2L site had twice the percentage of students classified as economically disadvantaged (85% vs. 46%, respectively). Percentages of students with disabilities were 12% (2H) and 19% (2L).

Similarities: Interviewees from both sites shared the vision that all students can learn, if given supports. Interviewees from both sites identified changing teachers' perspectives as the main challenge to achievement of the educational vision. Lack of

resources was second on the list, as these are both small sites with limited financial and personnel resources. Indeed, the 2L was just recovering from a severe financial crisis.

At both sites, the psychologists, who are employed by the regional Education Service Centers (ESC), provide inservice for teachers on topics related to special education. Further professional development is provided by the Ohio State Support Teams (SSTs). In both sites, an attempt is made to schedule IEP meetings during teachers' planning time.

Both sites have school visits and orientation days for students transitioning from elementary to middle school and from middle to high school. Special education teachers from the different schools meet to talk about the incoming students with disabilities and introduce the students to the special educators at the new school. Both sites also share the expectation that all students will pursue a college education and offer supports and transition programs that connect the school to area colleges.

The two sites do not have formal school-wide programs for behavior management. The 2H interviewees stated that behavior is not an area of concern at their schools, and 2L staff defined student behavior as a challenging area. Interviews and surveys from both sites indicated the presence of supportive families and strong connections with local colleges and business.

Differences: The 2H site has a well-structured RtI system, with a focus on early intervention. The concern with careful and well-documented observation and identification processes appears to permeate all grade levels, from preschool through high school. The other side of this carefully designed system is the feeling of drowning in paperwork shared by special

education personnel. The 2L is in the process of adopting a multitiered system to identify students in need of further intervention or potential identification for special education services. Yet, at this point, focus is still on compliance with IDEA requirements.

At the 2H elementary and middle schools, students with disabilities are being taught in general education classrooms for most of the school day. At the high school level, inclusion occurs for science and social studies, and students are pulled to resource rooms for mathematics and English. Teachers' personalities and content knowledge were identified by interviewees as influencing the success of co-teaching. Inclusion is a new process at the 2L site. Co-teaching is starting at the junior high school, but pull out is still the most used strategy to provide services for students with disabilities.

The two sites are moving toward the adoption of Ohio Learning Standards. The 2H site is moving fast, particularly for the elementary grades, and the 2L site is moving slowly and just finished training teachers on the new standards. Likewise, both sites were using data to monitor student progress and differentiate instruction. However, at the 2H, data analysis has been in place for a long time, and the 2L site has only recently adopted a meeting structure that encourages the analysis and discussion of data. Technology is another area in which the two sites differ. At the 2H, technology is an asset; the 2L site struggles with the lack of technology.

Summary: The two schools are adopting similar instructional practices, such as multitiered systems of intervention and co-teaching. The main difference among them is time. The 2H has been implementing those practices for a long time; administrators and teachers had the opportunity to correct errors and become experts. The lower-ranked site was in a state of fiscal emergency until recently. The focus on dealing with the financial emergency delayed the process of dealing with the instructional emergency. The newly hired 2L administrators are now trying to implement reforms that may yield much needed improvement in student performance (if they can remain in their positions, as funding is still precarious).

We have high expectations for all of our students, and I know that sounds very broad. . . . We don't believe in hitting the minimum standards. We want to push our kids to [reach] the maximum. We know all kids can learn, so it's our job to find out the best path for them and push them there.
2H administrator

Typology 3

Typology 3 sites are located in small towns in rural settings in areas of moderate to high median income. The 3H is a small district, and the 3L site is almost four times larger; however, the percentage of students with disabilities was similar, at 13% (3H) and 15% (3L).

Similarities: Limited resources were a common finding at both sites. To address lack of resources, staff must prioritize funding, rely on each other, and be creative. At both sites, students with disabilities, who require more intensive intervention or specialized services (e.g., blind/visually impaired students), are placed in units operated by the ESCs. Both sites organize activities to facilitate the transition of students who are moving to middle or to high school. Both sites have ESC-run career and technology education centers (CTCs) that are described as rigorous and focus on postsecondary education. None of the sites use a specialized behavior management program, although the 3L site has a partnership with a social services agency to support students who have behavior or family problems.

Our theory is . . . we want our teachers to work smarter, not harder. We don't want them to go overboard, but we want them to put the right kind of information in the IEP, so we give them things like graphic organizers to help write a [student] profile. *3H administrator*

Co-teaching is not regularly used at any of the sites. Both sites schedule planning time for teachers either by grade level or departments. Both sites are involved in aligning the curriculum with the Ohio Learning Standards. At the 3H, the ESC is leading the process; at the 3L, a position of curriculum coordinator was created to help with the alignment. Interviewees from both sites stated that they offer the same core curriculum to all students, including students with disabilities. Both sites use data to inform instruction. Teachers at both sites tend to use Lexia and Accelerated Reading as supplemental reading programs, but both districts do not support or encourage the use of any particular supplemental program.

Differences: Although interviewees from both sites shared the vision that all students can learn, challenges to attain the vision differed among sites. At the 3H, interviewees cited teachers' resistance to change and the district's size, as small size may favor communication but also limits the resources available. At the 3L, interviewees cited lack of resources, weak family participation, and transient leadership.

Although both sites invest in PD, the 3H site has an organized process. PD focuses on yearly themes, such as Ohio Learning Standards, empowerment, or teacher evaluation. For the past five years, the district has brought in experts to work with teachers, students, and parents on interventions for autistic children. At the 3L site, PD is mostly provided by the ESC and has been focused on Ohio Learning Standards. The LEA contracted with a consultant for an initiative on “Writing across the Curriculum.”

When hiring new teachers . . . the number one [concern] is probably someone that’s going to care, because if they care about what’s going on, then they’re going to be good at everything. . . . Anybody can open a book up and dive in, and learn the material, and get it across to [the students]. Caring is probably number one. *3H administrator*

The 3H site uses a well-structured system to identify students for further interventions. The ESC provides PD, resources, and guidance, and central office staff is closely involved in the process. Students with disabilities are placed preferentially within general education classrooms. At the 3L site, the newly hired special education coordinator is improving the identification process and working with teachers to improve the IEPs. The site is starting inclusion at the elementary school level. Regarding technology, the 3H is located in a technology-driven county where the ESC serves as an information technology center

and data storage warehouse. The status of technology at the 3L site was summarized by an interviewee: “Not possible; no money.”

Summary: Differences between the two sites in this typology are found in a number of areas. First, although the sites are located in similar communities, the 3L has a considerably larger population of students classified as economically disadvantaged (47%) compared to the 3H (17%). Second, the 3H site has a stable leadership structure with close ties to the community. The LEA has a strong focus on professional development, a technology-rich environment, and a well-developed system of intervention that appears to be working appropriately. Alternatively, the 3L site has had three superintendents in 10 years. Financial resources are scarce, technology is scarce, and initiatives are all too recent to have had an impact on student outcomes. A strategy that appears unique to the top-ranked district is the use of computer programs for test preparation. The question that only an experimental study can address is whether this strategy explains the small achievement gap between students with and without disabilities at the 3H site when controlling for differences in demographics.

Typology 4

Typology 4 sites are located in urban, high poverty areas. The 4H has a relatively small, homogenous population (less than 700 students). In contrast, the 4L site is significantly larger (close to 4,000 students), with a diverse and mostly poor population. Students with disabilities comprise 14% of the 4H student population and 20% at the 4L.

Similarities: Both sites expressed the vision that all students can learn and it is the schools' responsibility to find ways to support students. Administrators from both sites describe themselves as involved leaders, with a focus on instruction rather than management. Challenges to achievement of the vision also were common to both sites and included teachers' resistance to change their old habits and open enrollment. Open enrollment was viewed by both sites as a challenge but for different reasons. For the 4H staff, open enrollment keeps them open but brings large numbers of needy students, and the LEA does not have enough personnel and resources to help them. Staff from the 4L stated that the good students are leaving to attend smaller school districts and the more challenging students are staying. Both sites have a focus on PD and good relationships with the local SSTs. Both sites also use a multitiered system of intervention and focus on early detection and intervention. Both sites offer services to facilitate transition of students from elementary to middle, from middle to high school, and beyond high school. The 4H site is becoming wireless; students at the 4L have access to laptops.

There is no intervention that works well for all students. [Teachers] need to adapt. *4L teacher*

Differences: At the 4H site, funding is tight, and administrative and teaching positions have been cut. To obtain extra resources, the nearby districts are pooling resources. For instance, the 4H high school offers calculus to the nearby LEAs, and another LEA offers chemistry. Also, to maximize resources, the district tries to hire teachers who have more than one area of expertise, such as mathematics and science. Because the 4L site is in high priority status, money is not an issue. Moreover, the locality just approved a levy to allocate more money for the LEA. However, schools have been consolidated to cut expenses.

In the 4H elementary schools, students with disabilities stay 240 minutes a week in the general education classroom and 160 minutes in the intervention room. The middle school is starting inclusion but not the high school. Students with disabilities in the 4H are mostly high functioning, and students with more severe disabilities are placed in the ESC units. The 4L,

which serves students with a range of disabilities, is moving toward full inclusion and co-teaching. At the high school, the students work in resource rooms during mathematics and reading but are in the general classrooms for the other content areas. Although some co-teaching is used, the interviewees commented that the schools do not have enough special education teachers for the number of students with disabilities. The 4H does not use co-teaching, as they do not have enough staff, but collaboration is an asset. The 4L site is providing training on co-teaching and has started the process at its elementary school. Use of data to inform instruction is well-implemented in the 4H site and starting at the 4L.

Teachers here are very competent and . . . as I said a lot of times, they have things in place well before . . . I am even called in [for meetings]. The students who are identified and are in the program really benefit from the small supportive nature of this school. We have good special education teachers, we have good regular education teachers, and the school is small enough that teachers can really keep track of these students well. *4H student support staff*

Behavior is not a concern at the 4H schools. The 4L site uses PBIS for the elementary grades. For the upper grades, size is a problem. The counselors are overwhelmed, have no time to develop good functional behavior management plans, and responses tend to be more punitive than corrective. The 4H interviewees mentioned supportive parents and community and partnerships with the local university. Interviewees from 4L reported a number of initiatives to involve parents, including a parent liaison position, broadcast calls, weekly folders that must be signed, festivals, celebrations, and home visits. Participation, though, “is a challenge.”

Summary: The two sites are quite similar in the ways they envision and approach education. Although the 4L is moving toward inclusion and co-teaching, the 4H appears to be comfortable in how it is serving students with disabilities. The key factor, it appears, it is time to implement initiatives fully. A lesson that may be learned from this typology is that small schools and supportive families are two assets that strongly influence student achievement. Unfortunately, school districts have no control over these assets. Moreover, findings from these sites and other districts in this study show that support from families is not so much an outcome of schools’ efforts to involve them but mostly of societal factors that are beyond school control. All schools can do is minimize the impact of those factors on students’ engagement in learning. Community-based organizations, such as parent organizations, may have a key role to boost support for schools amidst transient communities.

Typology 6

To have the best teachers working with the students with the most needs. Honor students will do well despite of the teacher, but not the other way around. It also sends a message to the school—if these students were not important, the school wouldn't be sending the best teachers [to work with them]. *6H principal*

Typology 6 sites are located in urban or suburban, high median income areas. The 6H site has a large student enrollment, but low diversity (93% White) and poverty (4%). The 6L has a smaller student enrollment, with the majority of students from minorities (92%) and low-income (56%) families. The site also has a slightly larger percentage of students with disabilities (17%) than the 6H (11%).

Similarities: Both sites have transition services for students moving from elementary to middle school and from middle to high school. At the 6H, the elementary schools organize joint activities for their 6th graders, and the middle school brings the 7th graders so that students get used to each other and start making friends. Conversations about career start at junior high and 90% of the high school graduates, including those with disabilities, attend college. The 6L interviewees commented about strong relationships with a number of community colleges that send speakers and organize field trips for juniors and seniors.

Both sites are moving toward Ohio Learning Standards. Interviewees and survey respondents from both sites commented that they use a variety of assessments to differentiate instruction. To provide extra student support, the 6H middle and high schools adopted the Learning Lab, a 30-minute period in the school day allotted for a variety of activities. For students who are struggling academically, this is the time to ask a teacher for help, complete a formative assessment, or work on the OAA practice test. Gifted and talented students use the time for special projects. Students with disabilities may receive specialized interventions. A similar support system, called Study Skills, is described in the 6L high school. Interviews and surveys from both sites highlight strong family participation and community support.

The biggest obstacle to be great is being good. And we could easily talk about how good we are, but we want to be great. *6H principal*

Differences: Both sites perceived special education as an integral component of general education but face quite different challenges. For the 6H, the challenges to attain the vision include teachers' resistance to change and conformism (the path from good to great). For the 6L site, student mobility, outsourcing services, and leadership instability are the challenges.

The 6H has its own academy to provide professional development but also supports off-campus activities using a rotating system to ensure that all teachers have opportunities to attend conferences. Information from the 6L is contradictory, with some interviewees indicating no opportunities and others stating that PD opportunities are many.

The 6H has adopted inclusion and students lead their IEPs as early as grade seven. The site uses co-teaching at the junior high school and is now expanding it to the elementary school. The 6L just recently hired a special education director who is reviewing IEPs to improve quality.

It's not only about getting the right people on the bus, but it's getting the right people in the right seats on the bus. *6H administrator*

At the elementary level, 5th graders but not 6th graders with disabilities are now integrated into the general education classrooms, and at the high school, students are mainstreamed for most classes. Although co-teaching may not be fully implemented, collaboration occurs at all grade levels between general and special education teachers, according to interviewees.

The elementary school at the 6H site uses Love and Logic as the school-wide behavior management intervention. The upper grade schools have school climate committees and a system of incentives. However, interviewees agreed that behavior is not a problem. At the 6L site, the special education director tried to start PBIS at the elementary school, without success.

Regarding technology, the 6H site is distributing iPads to all students and bringing some elective classes online. At the 6L site, interviews and surveys indicated that not all teachers, particularly special education teachers, have technology available.

Summary: The LEAs are quite different regarding demographics, leadership experience, and strategies. The 6H has a homogenous, median high income population with long-standing leadership that has a clear vision of where to go and how to get there. This vision is shared across all levels. The word *careful* resonated throughout the findings from the 6H site: careful hiring process, careful assignment of teachers, careful adoption of programs through the use of pilots, and carefully implemented co-teaching. Additionally, the LEA is using technology to offer more electives and engage students. The 6L is a high poverty LEA, in a state of continuous leadership transition, and therefore, initiatives are always in an incipient stage of implementation.

Typology 7

Typology 7 sites are located in suburban, high income areas. The two sites have high average scores on the state assessments but differ in the achievement gap between general education students and students with disabilities. The 7H has a smaller gap than the 7L site. 7H also has a smaller population of students with disabilities (18% vs. 34%, respectively).

Similarities: Both sites have a vision of high expectations for all students. Both sites

There's an expectation in our community that [students with disabilities] will not be just served but served well. *7H special educator*

consider that the biggest challenge to attain the vision is that general education teachers are not well versed in differentiated instruction and lack information on students with disabilities, particularly the more severe disabilities. Comments on funding were similar for both LEAs. In the two districts, IDEA and state funds do not cover expenses for students with disabilities, and the localities provide strong financial support to the schools.

Both sites are committed to professional development. The 7H site sets aside funds to support teachers to attend conferences and central office staff provides in-services with required attendance. The 7L site is implementing Professional Learning Communities (PLC) and is involved with the Schlechty Center for design quality. Both sites have partnerships with nearby universities and colleges and work with them to organize services for their students with disabilities as they enter postsecondary education. The two sites also are immersed in aligning curricula with the Ohio Learning Standards and analyzing student data to differentiate instruction. Both sites are technology-driven and have either a technology department or an expert to provide PD and support for teachers and students. Both sites are implementing technology initiatives, supported by local funds or grants, to provide computers to all students. Both sites state have strong family and community involvement.

Differences: The 7H has a focus on early intervention. IEPs are closely monitored by central office staff, although the focus is not compliance but student progress. High school students run their IEPs. Interviews at the 7L site conflicted, as some interviewees talked about their experience in using the RtI system and others stated that the system was not yet in place. At the 7H site, students with disabilities are integrated into general education classrooms with supports. Study hall is one of the strategies used to offer extra support for the students. The 7L

site is moving toward full inclusion and expects to have all students with specific learning disabilities taught in general classrooms within a year.

Regarding behavior management, the 7H elementary school has a character education program. For the other grade levels, it is mostly clarification of rules and consequences for breaking the rules. At the 7L elementary school, students are assigned to small groups, called Pride, under a teacher's leadership. The Pride leader becomes the students' advocate and their advisor. In these small groups, the students learn about the Seven Habits of Highly Effective Teens.

Summary: These are two high achieving LEAs that are located in different communities and undergoing different stages of development. The 7H is located in a stable community that has not experienced many changes, and the 7L's community is quickly changing to become poorer and more diverse. The 7H site appears well settled in its organization and structure while keeping up with the changing educational landscape. The schools are preparing for Ohio Learning Standards and new assessments, incorporating technology to enhance education, and using the Internet to improve communication. This "modernization" occurs side by side with well-established instructional processes that provide a sense of stability to the schools.

There is just so much at one time that we're all trying, everyone is trying to wrap their heads around . . . and we've had a lot of change in central office recently, so it's kind of getting used to the new people again. *7L administrator*

Both LEAs have unique strategies to share with other districts. The main strategy of the 7H is the integration of students with disabilities into the spectrum of abilities and potentials that must be addressed by teachers. How to attain this integration is a challenge that merits exploration. To bring central office staff and teachers from this LEA to present to other LEAs may be a rich experience for all. The 7L, which is also high achieving, is using a system that has been successful in school districts across the country: small, teacher-student teams that remain together throughout the school years. No matter what these teams are called—*Pride Teams* is the name used by the LEA—they provide a supportive network that is particularly important for students who are struggling emotionally, socially, and/or academically. This may explain the success of their students with disabilities, who still attain high average performance scores despite the ongoing demographic changes experienced by the LEA. Table 4 shows the main differences across sites by typology.

Table 4: Main differences across sites by typology

	High-Ranked						Low-Ranked					
	Charter	2	3	4	6	7	Charter	2	3	4	6	7*
Student enrollment	150	900	500	650	1,650	1,000	400	450	1,550	4,000	850	2,150
Location	Inner city	Rural	Small town	Urban	Urban	Suburban	Inner city	Rural	Small town	Urban	Urban	Suburban
Economically disadvantaged	91%	43%	13%	39%	4%	0%	95%	93%	45%	77%	56%	15%
Students with disabilities	29%	12%	13%	14%	11%	6%	15%	19%	15%	20%	17%	15%
Reading average (SWD)	426.67	411.22	414.61	420.92	415.39	428.80	389.36	387.93	391.25	382.43	391.37	409.75
Math average (SWD)	432.00	415.70	417.83	412.76	409.00	428.31	383.98	379.69	384.23	378.73	380.71	400.45
Reading gap	-13.63	23.04	21.25	13.91	32.28	17.76	13.66	23.68	37.00	31.42	29.78	33.89
Math gap	-20.04	27.34	27.79	24.83	41.12	22.71	15.17	28.31	39.98	32.64	35.45	46.97
Leadership	Transient	Stable	Stable	Stable	Stable	Stable	Transient	Transient	Transient	Transient	Transient	Transient
Multitiered intervention processes	Mature	Mature	Mature	Does not use	Mature	Mature	Incipient	Incipient	Incipient	Incipient	Incipient	Change
Technology to support instruction	Available	Available	Available	Available	Available	Available	Poor	Poor	Poor	Poor	Poor	Available
Family engagement	Strong	Strong	Strong	Strong	Strong	Strong	Weak	Weak	Weak	Weak	Not clear	Strong
Unique Strategies	Parent volunteer 1:1 mentoring Cross-age peer tutoring		Technology-driven test preparation	Students involved in IEP since grade 3	Wiki site for parents Learning Lab Peer support Student-led IEP from grade 7	Careful identification Study hall Peer support Student-led IEP at high school			Recent inclusion strategy			Pride Teams Schlechty Center Study Hall Recent inclusion strategy

* Both sites in Typology 7 are high achieving; the difference was based on the size of the achievement gap.

CROSS-TYOLOGY

The analysis described in the previous chapter identified commonalities and differences among LEAs within each of the typologies. As the analysis proceeded, it became clear that some characteristics, frequently seen at successful LEAs, were not present in those LEAs that were less successful, independent of typology. Additionally, the teacher survey, conducted in April and May 2013, revealed important differences in responses from participants in the two groups of LEAs: higher-ranked (HR) and lower ranked (LR). In all components (vision, school supports, instruction, etc.), differences in mean responses between HR and LR teachers attained a 95% confidence level ($\alpha = 0.05$; scales ranged from 1, strongly disagree, to 5, strongly agree).

This section is divided into three parts. The first part, titled “The Big Picture,” highlights findings from the interviews, site visits, and teacher surveys to provide an overview of differences among the HR and LR sites that goes beyond their typologies. The second section, “Comparing Findings,” compares the findings from this study to the findings from the literature review. The third part, “Specific Strategies,” describes strategies to support students who are struggling academically, including students with disabilities, which are unique to the high-performing sites that participated in this study.

The Big Picture

Major cross-typology findings

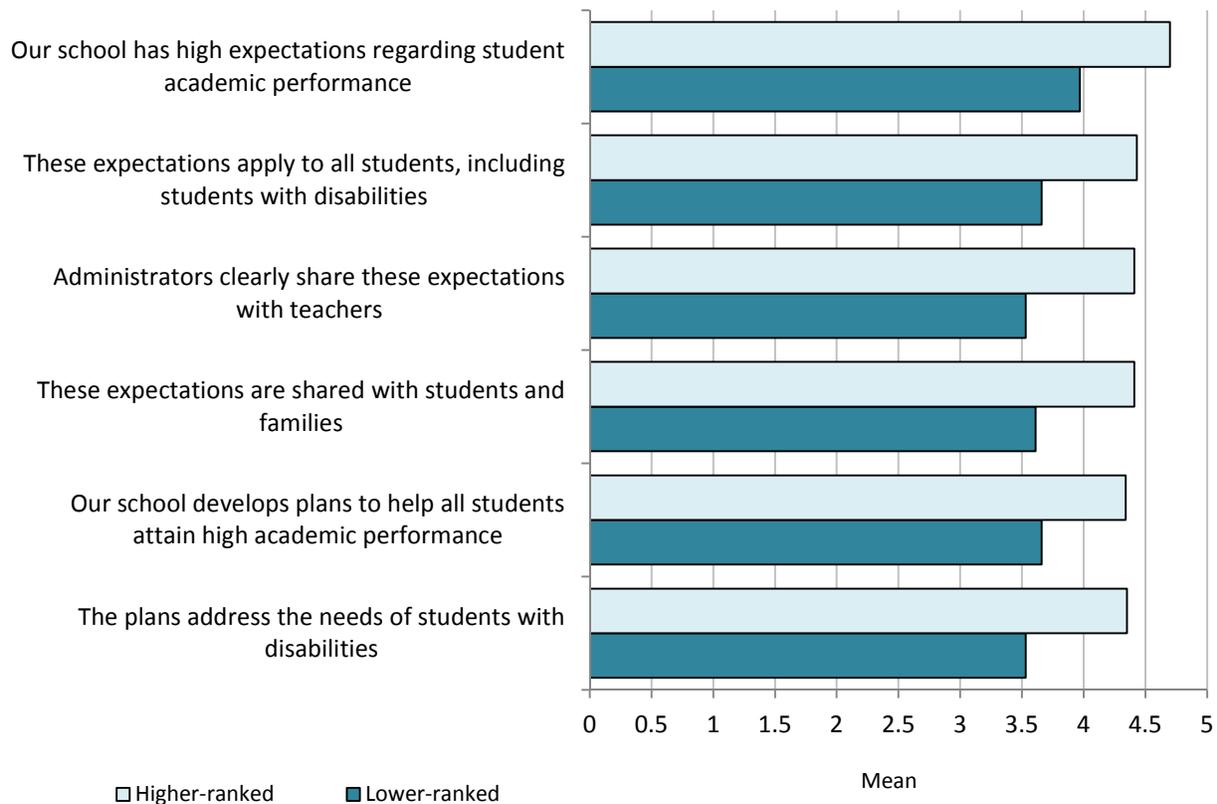
Eight components showed clear differences between high-performing and low-performing sites. These components are discussed below.

Size/Demographics: Size (represented here as approximate average daily student enrollment) is not a clear factor in differentiating top- and bottom-ranked LEAs. In some cases, such as Typology 2 and 6, the top-ranked LEA was larger than the lower-ranked one. However, the two largest LEAs (2,000 students and more) had lower achievement within their typologies. Is there a tipping point at which size becomes a challenging factor? To answer this question is beyond the scope of the present project. Regarding demographics, HR sites, compared to the lower-ranked LEAs, tend to have a student population that is more homogenous and less impoverished. Homogeneity also was a finding within the population of students with

disabilities, whereby HR sites tend to have more students classified as having specific learning disabilities, and LR sites tend to have more students classified as having emotional/behavioral disorders or developmental disorders.

Vision: The interviews suggested that across LEAs, administrators and teachers share a similar educational vision that embraces all students, including students with disabilities. However, the teacher survey indicated that HR respondents were more likely than their LR peers to see their schools as holding high expectations for all students, sharing these expectations with all stakeholders, and developing plans to help all students attain success. Figure 2 displays mean responses for the survey items related to educational vision. As seen in the graphic, means for HR responses ranged from 4.3 to 4.7 (i.e., tilted toward agree/strongly agree responses), and means for LR responses ranged from 3.5 to 3.9 (tilted toward “neither” responses). Differences were robust for all seven statements ($p < .000$).

Figure 2: Teachers’ perceptions regarding schools’ educational vision



Leadership: Interview findings suggested that most central office and school staff in all of the studied LEAs were involved, accessible, dedicated to their work, and have in mind the best interests of their students. The main difference was time in the position. In 5 of the 6 HR sites, leadership personnel had been in the position for four or more years and superintendents for at least five years. Alternatively, LR sites displayed a revolving door, particularly for central office staff. As initiatives start to be implemented, leadership changes; new leadership brings new initiatives, and none stay long enough to mature. Staff reacts to this “revolving door” with a sense that any initiative is a “fad of the month” and does not deserve much attention.

Supports for teachers: Two strong findings from the surveys that were not highlighted in the site visits included teachers’ satisfaction with professional development and the supports received from school administrators and central office staff. Regarding LEA supports for professional development (PD), more HR (97%) than LEA respondents (78%) stated that their LEA supported participation in PD. Likewise, HR respondents were more likely (88%) than their LR peers (63%) to state that LEAs supported PD opportunities in a variety of ways. HR respondents also were more likely to give higher ratings to their schools (means of 4.0 and above) on topics related to support for their work, including the presence of mentoring, and their involvement in decisions regarding curriculum and instruction. Differences in mean responses between the two groups were robust for all the statements ($p < .000$).

Time for planning lessons and collaboration was the only item that attained equal or slightly higher ratings among LR respondents than from HR teachers. Both groups were unhappy with the time they had scheduled for planning of lessons and collaboration across special and general education teachers (means around 3.0), but HR respondents seemed unhappier than their LR peers (i.e., gave lower ratings). The contrast in responses suggests that either HR schools do not provide teachers with sufficient time for planning, or teachers from high-expectations, high-demand schools also are more demanding (however, differences in mean responses were not statistically significant).

Multitiered systems of identification and intervention: The majority of the sites are using some type of multitiered system (MTS) of intervention to identify and support students. HR sites tend to use MTSs and use them well. The systems may not be called Response to Intervention (RtI), but they all propose levels of gradually more complex interventions, personalized to the individual student, with careful assessment of results. The focus of the system

is to recognize the students' needs as soon as possible and to ensure that the implemented interventions are appropriate to address these needs. LR sites also use MTSs, but most are in the beginning stages, still trying to find their way in terms of how best to apply the process and still concerned with compliance rather than results. This finding of incipient MTS, added to the finding that LR sites tend to have high student mobility (generally true of schools with high poverty populations), may explain the difficulty of these sites in helping struggling students. Students come later into the schools, with large academic gaps, and do not stay long enough to benefit from systems of intervention that are still in their developmental stages.

Inclusion: The inclusion of students with disabilities into general classrooms and their exposure to the general curriculum is another factor that distinguishes HR from LR sites. Although most sites are using inclusion strategies, implementation of these strategies is quite different across sites. HR sites tend to have been using inclusion for quite a while, teachers have become more familiar with the process, and co-teaching (general and special education sharing classroom responsibility) is increasing. LR sites are more likely to be in the beginning stages of inclusion and in need of more time to understand and improve the process.

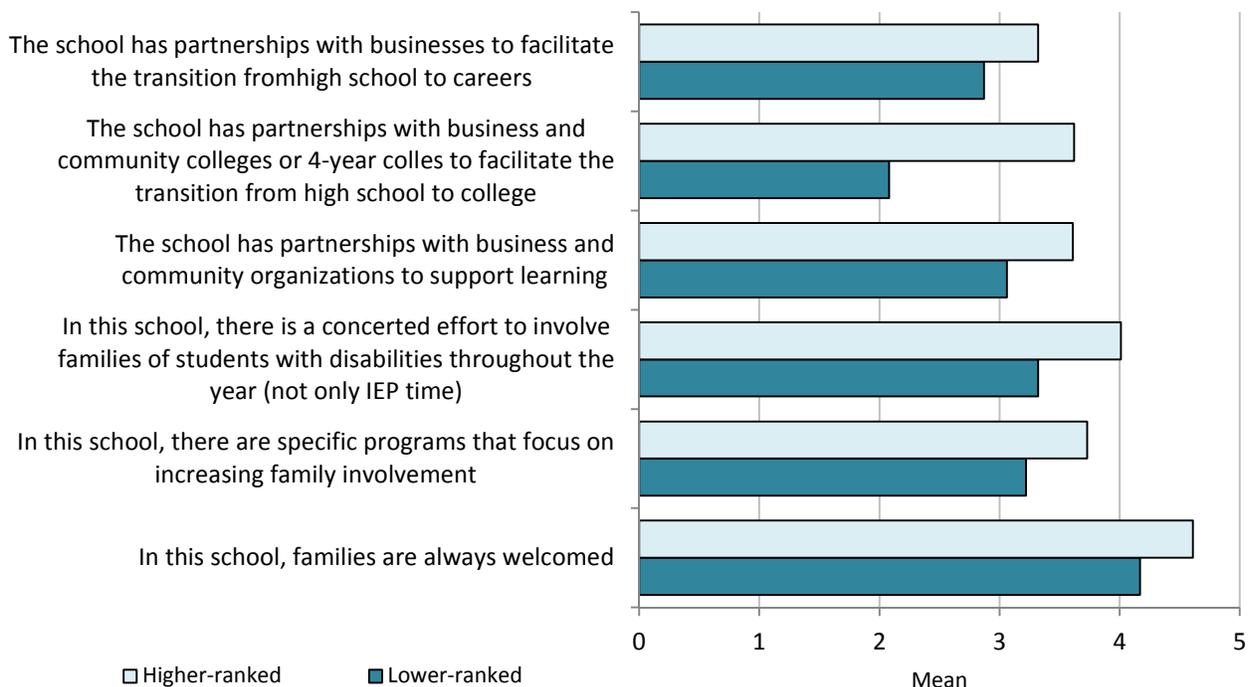
Responses to the surveys indicate that the majority of general education teachers from both groups were teaching students with disabilities. However, 70% of the HR respondents (general education only) indicated that students with disabilities comprised no more than 10% of their classrooms, compared to 40% reported by their LR peers. In contrast, 24% of the LR (general education) respondents indicated that students with disabilities comprised more than 20% of their classrooms, compared to 6% at the HR sites. In addition to the sense of having more students with disabilities in their classrooms, general educators from LR sites also were more likely to perceive that they were not involved in the decision regarding placement of students with disabilities. Of the LR respondents, 63% reported that they receive a list of students at the beginning of the year, with no consultation, compared to 40% of the HR respondents.

Technology: As one of the interviewees commented, technology is an ideal way to provide multisensory stimuli that will reach the diverse students' learning styles, challenge gifted students, and familiarize all students with resources that are essential to the job market. During the interviews and site visits, it became clear that HR sites tend to be technology-rich. More importantly, staff is trained on how to use the technology to diversify instruction. LR sites tend to be technology-poor and therefore unable to offer their students the wealth of resources

provided by computers and the Internet. Responses to the teacher survey reinforced this finding. Compared to LR respondents, HR respondents rated their schools/LEAs higher in providing teachers with resources to support instruction, particularly computers and Internet. Differences were robust for all items ($p < .000$).

Family engagement: Findings from the interviews suggest that the HR sites tend to be located in stable communities where families and other community members are actively involved in the schools. They are their children’s advocates, demand the best services, check their children’s progress, volunteer in classrooms, support school initiatives, and engage in fundraising. In general, interviews with LR staff suggested a less engaged community. The schools may invest time and money in activities to attract families, but it is an ongoing effort with mixed results. Responses to the teacher survey suggest a slightly different picture. Compared to LR respondents, HR respondents were more likely to give high ratings to their schools for items related to efforts to involve families and communities in school life, as displayed in Figure 3. Differences were robust for all items ($p < .000$). In other words, HR teachers are more likely than their LR peers to perceive their high-achieving schools as making efforts to bring families and community as partners.

Figure 3: Teachers’ perceptions about community/family engagement



Challenges and contributing factors

During the interviews, all participants were asked about the LEA vision and the factors that they perceive as contributing to or challenging the attainment of the LEA's educational vision. The vision was found to be quite similar regardless of the LEA's success or typologies. The challenging or contributing factors, however, differed. The following is a summary of the challenging and contributing factors proposed by LEA superintendents, charter schools' sponsor representatives, and special education directors.

Challenging factors:

- **Changing teachers' views:** General education teachers tend to perceive that students with disabilities are not their responsibility. As one of special education leader summarized, "Special education is down the hall."
- **Professional development:** Teachers, particularly new hires, need intensive professional development to be "up to the challenges." This is certainly an expensive demand for LEAs that are struggling with a shortage of funds. For the charter school leaders, the need for intensive PD is even more challenging, as they have high teacher turnover.
- **Changing demographics:** Open enrollment policies are changing the landscape for both sending and receiving sites. HR leaders fear that their high-performing schools are receiving more students with higher needs and will be unable to address the demand. LR leaders commented that the more challenging students are remaining and the high-achieving students are leaving. Concerns with this changing population include lack of expertise on more severe disabilities and higher demand for resources without corresponding increase in funds.

Contributing factors:

- **Collaboration:** Collaboration involves general education and special education teachers, administrators and teachers, and central office and school staff. Collaboration transcends the size of the district, but small districts appear to have it easier.
- **Engaged community:** Parents who value education and are engaged with their children's schools are a contributing factor cited by three of the HR interviewees but none of the interviewees from the LR sites.

Comparing findings

As noted in the introduction, this study was founded upon a review of research on programs and practices adopted by school districts and schools that have been successful in educating students who tend to struggle academically: students with disabilities and economically disadvantaged students.

On the following page, Table 5 displays similarities and differences between findings from the literature related to students with disabilities and findings from the OCECD Research Project. It is important to observe that findings tend to repeat, regardless of the methods adopted by the researchers or the place where the study happened.

A second and equally important discovery is that some of the findings that are traditionally attributed to high-performing LEAs, such as high expectations, also may occur in lower performing LEAs. The key is not so much a difference in vision but the ability of planning the steps to attain the vision and implement the necessary initiatives. Lower performing LEAs may stop at the vision. They either did not plan how to get there, or leadership does not have enough time to implement the initiatives that might help to attain the vision. Therefore, the adoption of a specific strategy is not a guarantee of success. Whatever strategy is adopted, it must be well-planned and well-implemented, carefully monitored, and given time for correction of errors and maturation.

Table 5: Comparison of findings from literature review on students with disabilities and the OCECD Research Project

Categories	Literature Review Findings	OCECD Research Project Findings
IDEA requirements	Early identification Focus on facilitating transition Use of inclusion	Higher ranked LEAs (HR) were more adept to early identification and use of inclusion than lower ranked LEAs (LR). All had programs to facilitate transition across grade levels and postschool
Defining principles	High expectations for all and shared responsibility for achievement	High expectations are a common vision; LEAs differ in the quality of plans to achieve the vision and commitment to the plan
Infrastructure	Creative use of funding New/renovated buildings	Most LEAs try to use funding creatively and renovate buildings when possible; funding is an issue for most LEAs (high or low)
School organization	Clear behavior expectations and positive reinforcement	All schools use positive reinforcement; behavior is not a major finding
	Leadership focused on instruction; no specific style	Major finding was stability of leadership; LR LEAs tend to have transient leadership
	Teacher collaboration, particularly general education and special education	Teacher collaboration is a need, but teachers need time to collaborate and plan lessons together
	Professional learning communities (PLCs)	Not a finding; most higher ranked LEAs did not have PLCs
	Guaranteed planning time to collaborate	Most LEAs (higher or lower ranked) offer grade-level or department-level planning time; rarely time for general and special education teachers to collaborate
	Ongoing PD tailored to teachers' needs	All LEAs are investing in PD, despite shortage of funds. HR LEAs are more systematic in what they offer
External supports	District policies focused on hiring and maintaining high quality personnel	All LEAs had similar hiring processes, were focused on hiring good people, and provided mentoring to new teachers
	District staff supporting instruction at school level	Teachers in HR LEAs perceive higher levels of support from central office than teachers in lower ranked LEAs
	Family involvement	The study suggests that it is rather the family's own values (social capital) that explain why some LEAs have more engaged families.
	Business and higher education partnerships	All LEAs search for partnerships; wealth of partners depend on location
Instructional strategies	Access to core curriculum for all students	Essential; either with inclusion or exposure to core curriculum in resource rooms
	Ongoing assessments with the use of data to inform instruction	All LEAs are moving toward alignment of curriculum with Ohio Learning Standards; HR LEAs were further along in the process
	No specific instructional strategies and programs	It is not the program but the structure of instruction and supports

Specific Strategies

As researchers visited the schools and interviewed personnel, they looked for strategies that the sites were implementing to address the needs of students with disabilities, with an emphasis on the successful sites. Overall, top-ranked and lower ranked sites tend to use similar strategies and even similar supplemental programs. However, a few strategies found in HR sites appeared particularly useful or promising. Five merit further attention as discussed below.

Required volunteer time from parents: The charter school in this study, located in an impoverished urban setting, is the only site with an inverted achievement gap (students with disabilities score on average higher than those without disabilities). To enroll their children in the school, parents are required to provide a minimum of 20 hours of volunteer work a year. Parents who cannot come to the school building may still volunteer by doing at-home activities. This requirement seems a good tool with which to break the barrier between parents and schools so commonly mentioned by sites located in high-poverty areas. Maybe traditional public schools should be allowed to impose mandatory volunteer requirements on their parents.

One-on-one mentoring: Adopted by the same charter school, this system involves teachers who are assigned to one or a small group of students with disabilities and remain with them throughout the year. The teachers familiarize themselves with the students' needs and their IEPs' recommendations, become the students' advocates, mentor them, and make sure required accommodations are implemented for classroom work and statewide assessments. The continuity of relationship was described as providing familiarity and confidence for the students.

Student-led IEPs: Schools that involve students in their IEPs indicated a number of positive outcomes. The students familiarize themselves with their strengths and the areas in which they need support, become goal-oriented, and gain confidence in advocating for themselves. During the study, a couple of interviewees commented that schools overprotect students with disabilities and do not prepare them for adult life. Student-run IEPs may be the answer to this potential threat. Although a number of other sites have student-run IEPs, the 4H LEA starts the process earlier, sometimes as early as grade three, "depending on the student level of maturity," commented an interviewee.

Peer-support systems: Used by the 6H and both sites in Typology 7, in the peer-support system, a student is assigned to provide supports to a student with a disability. (The system also is used for students who struggle in specific academic areas.) Supports can take the form of

helping a student with motor impairments to reach the cafeteria or the bus or helping a student with cognitive disability understand a teacher's direction. The peer system is described as beneficial to both students, as it provides the extra help for the student in need while fostering responsibility and leadership in the helper.

Extra scheduled time: The study hall/learning lab is a scheduled time during the school day, generally shorter than the full class period, in which students take the responsibility to search for help for their areas of need. For instance, a student struggling with mathematics will ask for help from a math teacher. Students who are doing well academically may use this time to work on a project or read a book. Students with disabilities may be part of the group that is working on an extra project, receiving assistance from the math teacher, or receiving extra supports from an intervention specialist, depending on their academic needs. The strategy, found in the 6H, 7H and 7L sites, individualizes supports and places greater responsibility on the student to initiate them.

Except for parent volunteers, the common thread across these strategies is personalized attention within a structured environment. To foster student's responsibility is another common element of at least three of those strategies. A cost-effective way to support struggling schools is to offer a chance to visit sites that are implementing these personalized strategies well, with positive outcomes, and bring representatives from these sites to talk to teachers and administrators across the state.

A note of caution is merited, however. This is an exploratory study that used a qualitative approach to identify best practices. A randomized controlled trial (RCT) is the only research design that can establish a cause-effect relationship; that is, only RCTs can establish that specific strategies are the causes of the sites' strong performance for students with disabilities. RCTs, albeit expensive and difficult to implement, are the correct path to answer the question of what works in the education of special needs students.

CONCLUSIONS AND RECOMMENDATIONS

As discussed in the companion report, *Evidence-Based Practices in Special Education: A Review of the Literature*, two criteria are recommended to identify evidence-based practices in education: quality of research and quantity of quality research. With these criteria in mind, the strength of the OCECD Research Project relies in its comparative design approach, founded upon a careful conceptual framework that draws from research. The study was able to compare and contrast information to corroborate or contradict findings from this research and the literature on best practices for students at-risk of academic failure. This process allows greater generalization of findings.

The OCECD Research Project highlighted a few strategies that are being adopted by all participating LEAs, higher or lower achievers, such as (1) multitiered systems of intervention that allows early identification of needs and immediate intervention; (2) the use of inclusion, particularly for students with disabilities who are cognitively high-functioning; (3) the emphasis on collaboration between general and special education teachers, including the use of co-teaching; and (4) the emphasis on ongoing analysis of student performance data to inform instruction. The main difference between LEAs on the two extreme of the achievement range was the quality of the implementation of these strategies. The first lesson that can be taken from this study is that, whatever you decide to implement, do it well, give it time to correct mistakes and familiarize teachers with the process, and keep evaluating to be sure that the implementation is done with fidelity. This finding correlates with findings from Implementation Science studies.¹

A second lesson from this study relates to teacher preparation. In both higher-achieving and lower-achieving sites, LEAs are focused and spending heavily on professional development. Part of the professional development is inevitable, as it relates to new state and federal initiatives that must be implemented with care, such as the new Ohio learning standards. However, part is basic pedagogical information, such as preparing IEPs or doing effective collaboration. The point of view frequently shared with the evaluators is that teachers come to the job market unprepared and need intensive preparation to become effective. Such preparation should be unnecessary and is particularly taxing to the LEAs, particularly when they are already struggling to contain costs.

¹ For more information on Implementation Science in social sciences, see the National Implementation Research Network, <http://nirn.fpg.unc.edu/>

A third important lesson from the study is the role of early intervention and personalized instruction on improving academic outcomes for students with disabilities. Early intervention is reflected in the care with which high-performing schools conduct their multitiered systems of intervention. Some of the unique strategies highlighted in this report include one-on-one mentoring, Study Hall/Learning Lab, or Pride teams. All these are strategies that place an emphasis on establishing relationships of trust between instructor and student, and greater responsibility on the students for their own learning. Responsibility is also the idea behind the student-led IEPs, an initiative adopted by many high-performing LEAs. Personalized instruction and responsibility are also underlining components of technology initiatives found in some LEAs, whereby students receive their own personal computers (iPods, iPads, laptops) to gain more control over learning process.

These three major lessons taken from the OCECD Research Project are reaffirmed in the literature reviewed for the study. Each of these three lessons brings forth different roles among stakeholders. With these two perspectives in mind (the current study and the literature review), the following recommendations are proposed as a bridge to connect educational research to practices.

Recommendations for practice

Ohio schools are in a period of major redesign and students with disabilities are central to the success of these efforts. This context of change provides opportunities to move the overall system of special education in the direction of improved results. The following recommendations for practice draw from the Ohio Research Project's findings and align with OCECD and ODE policy priorities. The goal is to provide actionable strategies that have the potential to improve academic outcomes for students with disabilities as well as for all Ohioan students.

A total of eight recommendations are organized in three clusters. The first cluster proposes a framework to ensure implementation of quality (evidence-based) practices. The second cluster centers on the alignment between general and special education. The third cluster focuses on two other groups of stakeholders: students and parents. Table 6, on the next page, summarizes the recommendations. A more detailed discussion of each recommendation follows, and suggested resources for implementation are included in Appendix A.

Table 6: Summary of recommendations for practice

Cluster 1: Leadership for implementation of evidence-based practices

Recommendation: Implementation

Develop leadership capacity for implementing evidence-based practices at the district and school levels, with an emphasis on consistency and sustained focus.

Cluster 2: Special education and general education alignment

Recommendation: Multitiered systems of interventions and supports

Fully implement multitiered systems of interventions and supports and use data to inform continuous improvement and redesign.

Recommendation: Co-teaching

Fully implement co-teaching models that enable access to the general education curriculum and intentional collaboration between special education and general education teachers. Use data to inform continuous improvement and redesign.

Recommendation: Teacher preparation

Redesign teacher preparation programs to prepare students more completely for competencies needed to work collaboratively within inclusive settings, including new roles and responsibilities for intervention specialists and differentiated instruction for general education teachers.

Recommendation: Professional development

Provide collaborative PD opportunities including supports for job-embedded professional learning within inclusive settings.

Cluster 3: Leveraged focus

Recommendation: Early literacy

Focus attention and commitment on students with disabilities within the context of early literacy initiatives and the new third-grade reading guarantee. Implement evidence-based practices and use data for continuous improvement. Draw from the most current early intervention research and incorporate findings.

Recommendation: Postsecondary readiness

Focus attention and commitment on students with disabilities within the context of college and career readiness initiatives and new graduation requirements. Implement evidence-based practices and use data for continuous improvement. Draw from the most current research and incorporate findings.

Recommendation: Parent partnerships

Focus attention and commitment on partnerships that strengthen parental capacity to support student learning and make informed decisions for and with their children with disabilities.

Cluster 1: Leadership for implementation of evidence-based practices

The importance of leadership at the district, school, and classroom levels emerged as the most powerful driver of significant changes to practice. This has been verified in the research literature and by the findings in this study that highlight particularly the importance of consistency and sustained focus. A shared leadership structure is critical to address the following three challenges: adoption of evidence-based practices that improve student outcomes, implementation of collaborative structures to create cross-district/school planning and teaching teams, and a focus on and commitment by everyone to a path of professional learning and accountability (Ohio Leadership Advisory Council, 2013).

1. Adoption of evidence-based practices

Research literature highlights the challenges for many school districts to maintain fidelity in the implementation of its initiatives (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Morrison & Magliocca, 2012). In successful school districts, implementation happens from two perspectives. First, learning standards provide the targeted instructional goals. This allows a focus of effort on effective teaching practices and multitiered intervention, and a basis for identification of the individual needs of students with disabilities. Second, differentiation and accommodations for the students with disabilities is enabled around these targeted goals.

Student performance data are current and readily available in an actionable format. Focused efforts are made to assess student performance on specific curricular tasks. Pacing of the learning tasks and adjustments become the essential activities of instructional planning.

Implementation occurs as a process. Clear, well-focused instructional objectives guide instruction. Planning time is provided to adapt and adjust how instruction proceeds. Finally, embedded PD allows practitioners to develop and share which evidence-based practices work for particular students (Coggshal, Rasmussen, Colton, Milton, & Jacques, 2012).

The present study suggests that instructional leadership transcends all professional roles in the more successful school districts. Focused instruction is the highest priority. There is a noticeable pride in the craft of teaching. Students with disabilities are accepted as shared professional challenges to be met. High expectations for achievement are communicated in many positive ways to everyone. More importantly, clear plans are developed to document what must be done to achieve the proposed expectations.

2. Implementation of collaborative structures to create cross-district/school planning and co-teaching teams

In successful school districts, collaborative structures are created throughout the organization. Collaborative teams provide coordinated planning between the central administration and the work within each school. In the best circumstances, this collaborative structure allows the flow of strategic information and promotes better planning and commitment.

Implementation of collaborative structures does not come easily. Leadership must create opportunities for these efforts. The need for closer coordination of efforts for students with disabilities, as well as tighter personnel resources, has created a driver for collaborative work. Success requires careful planning and attention to the ways collaboration may be possible. There seems to be focus on co-teaching and multitiered interventions as the basic vehicles. However, the effort extends to collaborative teaming across grade levels or departments. This requires special scheduling efforts to ensure joint planning and problem-solving are possible. As the current study identifies, however, planning time is a scarce commodity in many schools. The more successful LEAs have found creative ways to structure schedules to provide this valuable common time.

Findings from this study indicate that, in the majority of LEAs, teachers are involved in discussing and tracking student progress on common curriculum objectives. The levels of implementation of structures that support these discussions vary considerably between successful LEAs and their less successful counterparts. In several programs, it was apparent that differentiation and accommodations for students with disabilities was occurring frequently. Special education teachers benefited from a clearer understanding of the resources needed to provide students with disabilities with access to the core curriculum, and general education teachers benefited not only from discovering strategies that improve learning for students with disabilities but also for any student who is struggling academically. The study revealed general agreement that such an approach enhances the performance of these students in the common curriculum core and the performance testing that follows.

Accountability may be one of the most difficult barriers to overcome. Fundamentally, accountability begins with an attitude of attending to what is needed and changing one's approach when necessary. If a shared responsibility for students with disabilities emerges, there is greatly enhanced opportunity for teachers to more closely examine student performance data

and reflect on what works and what needs to be modified. However, without support and encouragement from key leadership personnel, implementation of collaborative structures is unlikely. In successful school districts, there is a great deal of attention paid to development of such structures and maintenance of continuity.

3. Focus and commitment of everyone to a path of professional learning and accountability

Collaborative teaming and co-teaching require important new capabilities (Holdheide & Reschly, 2008; Holdheide, 2013). Teachers from the more successful schools reported perceptions of their being better prepared for these strategies. Successful school districts address teachers' needs and ongoing changes in the educational landscape using PD. Leadership focuses the limited time and resources available for PD among many competing initiatives.

Findings from this study reinforce findings from the literature review that students with disabilities, to be successful, must be exposed to the core curriculum. To be successful in teaching all students, teachers must clearly understand the structure of the core curriculum standards as the basis of their work. Special education teachers must be proficient in accessing and teaching a broad array of general curricula. Their understanding and skill allow the necessary accommodations for students with disabilities to be made. General educators must be able to differentiate their instructional approach to create a successful experience for the students with disabilities. Teachers voiced concern about their roles and skills to implement these new demands.

If teachers were already prepared to assume their roles in a modern classroom, the focus could be concentrated more on implementation and accountability. With staff turnover and changing priorities from year to year, implementation of new and essential instructional strategies tends to suffer. Successful school districts work very hard to make these skills an accepted way to work with all students. Current research and policy recommendations provide guidance for practice. For example,

- Implementation science provides a basis in research for the critical importance of implementation and guidance grounded in what is known about relevant components and conditions of implementation (Fixsen et al., 2005).
- The Institute of Education Sciences provides a central, independent, and trusted source of scientific evidence of what works in education (see www.whatworks.ed.gov).

- Consensus connects research to results on the attributes of school leadership that work (Marzano, Waters, & McNulty, 2005).
- Consensus connects research to results on the art and science of effective instruction (Johnson, Perez, & Uline, 2013; Marzano, 2007).

Recommendation: Implementation

Develop leadership capacity for implementation of evidence-based practices at the district and school levels, with an emphasis on consistency and sustained focus.

Cluster 2: Special Education and General Education Alignment

1. Multitiered systems of intervention and supports

Most if not all of the LEAs studied were implementing multitiered systems of interventions and supports. Many of the less successful LEAs were moving toward the same path although these efforts were either at their very beginning or the LEAs were not sure how to proceed. Few called their systems RtI. A lesson from this study is that LEAs may not need a formal RtI process but may benefit from careful implementation and monitoring of multitiered systems of intervention that involve all faculty (general and special educators) with a focus on the student rather than the process. Current research and policy recommendations provide guidance for practice. For example,

- Response to Intervention, or Response to Instruction (RtI), is seen as a viable strategy for closing the achievement gap (Martinez, Nellis, & Prendergast, 2006).
- RtI establishes a unique role for special education and special educators within the larger education system (Council for Exceptional Children, 2007).
- The National Association of State Directors of Special Education (NASDE) provides a comprehensive review of research related to both traditional and more recent approaches to RtI to inform local decision-making. Companion blueprints for implementation at the school and district levels also are provided (Elliott & Morrison, 2008; Griffiths, Parson, Burns, VanDerHeyden, & Tilly, 2007; Kurns & Tilly, 2007).
- Research-based reading interventions in grades K-3 have been synthesized for practice (Scammacca, Vaughn, Roberts, Wanzek, & Targesen, 2007).

- Research-based mathematics instruction for students that have difficulty learning mathematics have been synthesized for practice (Gersten, Chard, Jayanthi, Baker, Morphy, & Flojo, 2008).
- Research-based interventions for struggling adolescent readers have been synthesized for practice (Scammacca, Vaughn et al., 2007).

Recommendation: Multitiered Systems of Interventions and Supports

Fully implement multitiered systems of intervention and supports and use data to inform continuous improvement and redesign.

2. Co-teaching

The presence of co-teaching and, in particular, the more experienced co-teaching partnerships was observed in higher performing districts that participated in this study. The most effective models integrate general education competencies related to content and high quality instruction with special education competences related to individualized instruction. This interface will become increasingly important as Ohio implements new learning standards incorporating instructional shifts and new online assessments with implications for accommodations.

Research shows that collaboration between general and special educators benefits the quality of instruction and supports for students with disabilities as well as students without disabilities. Teachers involved in collaborative partnerships often report increased feelings of worth, renewal, partnership, and creativity. These are among the findings of a metasynthesis of co-teaching research conducted by Scruggs, Mastropieri, and McDuffie (2007) and summarized by the National Dissemination Center for Children with Disabilities (NICHY).

The most common co-teaching variations outlined in the research are

- One teaches, one assists: One teacher leads the lesson for the whole class, while the other teacher provides support and behavioral management to individual students or small groups.
- Station teaching: The co-teachers provide individual support to students at learning stations set up around the classroom.
- Parallel teaching: Co-teachers present the same or similar material to different groups of students in the same classroom.

- Alternative teaching: For a limited period of time, one teacher provides specialized instruction to a small group of students in a different location.
- Team teaching (or interactive teaching): Both co-teachers share curriculum planning, teaching, and other classroom responsibilities equally.

Recommendation: Co-teaching

Fully implement co-teaching models that enable access to the general education curriculum and intentional collaboration between special education and general education teachers. Use data to inform continuous improvement and redesign.

3. Teacher preparation and professional development

The role of special education teachers has shifted, and it is clear that the challenge cannot be addressed by PD alone. There is a need to rethink the scope and depth of teacher preparation and PD for intervention specialists as well as general education teachers.

Three key findings from this study highlight the need to re-examine teacher preparation programs. First, LEAs feel the need to invest heavily in PD, despite the fact that many teachers arrive with Masters’ degrees. Additionally, there is a perception, particularly at the administrative leadership level, that teachers are focused on the “students in the middle” and feel uneasy dealing with special needs students, be they gifted and talented or students with learning disabilities. Further, the extent of inclusion of students with disabilities in general education, and their exposure to the general curriculum, was a factor that distinguished high- and lower performing sites.

Current recommendations in this area, based on research and policy priorities, provide guidance for practice. For example,

- Construct a new model for preparation of special education teachers in which special education is recognized as a legitimate contributor to RtI implementation, providing Tier 3 instruction as well as collaboratively planning Tier 2 instruction with their general education colleagues (Brownell, Sindelar, Kiely, & Danielson, 2010).
- Construct innovation configurations around new essential components such as inclusive services models; collaborative teaming/planning; collaborative skills; access to the general education curriculum/universal design for learning; access to the general curriculum/differentiated instruction; learning strategies, classroom organization and

behavior management, scientifically based reading instruction; family involvement; and student self-determination and collaboration (Holdheide & Reschly, 2008).

- Generate teaching effectiveness with job-embedded professional learning in teacher evaluation (Coggshal, Rasmussen, Colton, Milton, & Jacques, 2012).
- Design inclusive building educator evaluation systems that support students with disabilities (Holdheide, 2013).
- Recognize the unique and complex role of special education teachers in new teacher evaluation systems (Council for Exceptional Children, 2012; Holdheide, Browder, Warren, Buzick, & Jones, 2012).

Recommendation: Teacher Preparation

Redesign teacher preparation programs to prepare students more completely for competencies needed to work collaboratively within inclusive settings, including new roles and responsibilities for intervention specialists and differentiated instruction for general education teachers.

Recommendation: Professional Development

Provide collaborative PD opportunities including supports for job-embedded professional learning in inclusive settings.

Cluster 3: Leveraged Focus

1. Early literacy

Findings from this study confirm the critical role of early intervention and early identification of students' needs and abilities. Early literacy proficiency is a known predictor of later school success, and an essential component of early intervention strategies. Recent legislation strengthens the longstanding third-grade guarantee to give greater emphasis to reading instruction in early grades. The significance of early identification and intervention for students with disabilities is highlighted in this study, both in the synthesis of successful practices noted in similar large-scale studies as well as findings from the current study of Ohio schools. Well-established instructional practices in the pre-K through grade three were noted in the higher performing districts as a strategy by which to meet the individual needs of diverse learners.

Current research and policy recommendations provide guidance for practice. For example,

- The Institute of Education Sciences (IES) provides a synthesis of what has been learned from research grants on early intervention and childhood education funded by the IES National Center for Education Research and National Center for Special Education Research and published in peer-reviewed outlets through June 2010 (Diamond, Justice, Siegler, & Snyder, 2013).
- The Emily Hall Tremaine Foundation and Campaign for Grade-Level Reading presents a comprehensive report and action plan to help children with dyslexia/learning disabilities reach grade-level reading proficiency (Fiester, 2013a).
- The NAESP Foundation Task Force on Learning provides a vision and action steps for transforming education across the pre-K–grade three (National Association of Elementary School Principals, 2010).
- The Annie E. Casey Foundation provides updated research that underscores the urgency of ensuring that children develop proficient reading skills by the end of third grade, especially those living in poverty or in impoverished communities (Fiester, 2013b).

Recommendation: Early Literacy

Focus attention and commitment on students with disabilities within the context of early literacy initiatives and the new third-grade reading guarantee. Implement evidence-based practices and use data for continuous improvement. Draw from the most current early intervention research and incorporate findings.

2. Postsecondary readiness

Preparation of students for postsecondary options is central to work of schools. This readiness is the outcome indicator that predicts later success in life. For students with disabilities, the pathway may be toward career readiness, college readiness, or both. Choices are often complicated. In the current study, when asked questions about programs available for lower functioning students as well as transition practices, partnerships with career-technical education programs were frequently reported by interviewees. These are often operated in collaborative arrangements and require increased coordination to ensure high-quality pathways to success for students with disabilities.

The College and Career Readiness and Success Center (CCRS) at American Institutes for Research provides guidance for practice on a number of related topics. For example,

- Strategies to prepare students with disabilities and special needs for college and career, including examples of current programs and policies that help students with disabilities to transition successfully to college and career (Brand, Valent, & Danielson, 2013).
- How social and emotional learning (SEL) can help students to be college- and career-ready, including examples of initiatives and programs and outcomes and measures that can be used to assess SEL programming (Dymnicki, Sambolt, & Kidron, 2013).
- How career and technical education (CTE) can help students be college- and career-ready (Brand, Valent, & Browning, 2013).
- How to synthesize, organize, and evaluate an increasingly complicated and crowded field of college and career readiness initiatives (Lebow, Harris, & Smerdon, 2012).

Recommendation: Postsecondary Readiness

Focus attention and commitment on students with disabilities within the context of college and career readiness initiatives and new graduation requirements. Implement evidence-based practices and use data for continuous improvement. Draw from the most current research and incorporate findings.

3. Parent partnerships

The current study found that the more successful districts were located in communities that prized education and were engaged. The key was not so much what the schools did to engage parents but how the community reacted to the schools. Indeed, the schools that appeared to be doing more for parent engagement were those that described their parents as disengaged. This is often a multilayered challenge that overlaps issues of poverty and distressed families and communities. Solutions are not easy.

A body of evidence on parent engagement and innovative student-centered strategies can be drawn from the research. For example,

- Henderson and Mapp (2002) provide a synthesis of 51 studies about the impact of family and community involvement on student achievement and effective strategies to connect schools, families, and community.
- WestEd's Academic Parent-Teacher Teams (APTT) put a new and effective twist on parent-teacher interaction that gives parents new ways to understand their children's progress, prepares teachers to coach parents on key concepts each child is expected to master at each grade level, helps parents to understand that they are a key part of the

process, sets specific short-term academic goals and shows how to work on them at home (WestEd, 2013).

- Woodruff and Jennings (2012) provide a construct for development of strategies of intentional family engagement when implementing RtI as a means to connect family and communities to school and district academic goals for students.

Recommendation: Parent Partnerships

Focus attention and commitment on partnerships that strengthen parental capacity to support student learning and make informed decisions for and with their children with disabilities.

Recommendations for Further Research

This comparative case study approach has served well to uncover and confirm several findings about school resources and processes that differentiate school districts in their ability to meet the needs of students with disabilities. The challenge and benefit of research is that when it answers one question, it may raise three or four new ones. Therefore, this report concludes with some suggestions for further research that would continue on the path of learning more about what works for students with disabilities in Ohio. The recommendations support OCECD plans for a subsequent study that incorporates special education growth analysis for high-, middle-, and low-achieving schools. Further study also could inform new special education requirements for results driven accountability (RDA) outlined by the U.S. Department of Education, Office for Special Education Programs (OSEP).

The following suggested focus areas are based on what has been learned from the current study and the need to respond to the evolving system of educational reform initiatives. The suggestions are framed in the form of research questions for subsequent studies using rigorous methods.

Teacher Perceptions: The perception scales used in this initial case study (i.e., in the areas of vision, teacher support, technology, behavior management, curriculum/interventions, inclusion, use of data, and community/family involvement) revealed marked contrasts between groups of teachers in the high and low LEAs. Research can explore the question, What is the best way to improve these scales while considering their use as self-assessment tools for districts seeking improvements in their readiness to serve students with disabilities?

Value-Added Consequences: As Ohio embarks on value-added approaches for assessment and accountability for schools and school personnel, research is needed to address the question, what can be learned that gives us the best picture about how students with disabilities fare on these metrics, how do schools accommodate these growth measures into their process and achievement reporting, and how are the results attributed to the qualities of general and special education teachers? What are the unfolding and likely future consequences?

Individualized Education Programs (IEPs) Process: How can the IEP process for students with disabilities become more focused and accountable for each child's learning and take less time and resources to prepare, monitor, and update? Challenges for evolution of the IEP process include incorporation of Student Learning Objectives (SLOs) and student growth measures for value-added assessment and accountability; implementation of standards that incorporate new elements of the Ohio Learning Standards and shifts in practice for ELA/literacy and math; more limited guidelines for use of accommodations with new online assessments; transition planning; and forging stronger parent partnerships.

Pre-K–3 Literacy Development: As Ohio embarks on its statewide Third-Grade Reading Guarantee initiative, how will the initiative impact students with disabilities' retention and performance, and the match of school resources to the needs of each of these students? Also, what are the prior learning conditions that most clearly differentiate those students with disabilities who require retention and additional interventions from those who do not?

Postsecondary Readiness: In light of Ohio's new report card and graduation requirements, coupled with an increased focus on college or career readiness, what are the challenges faced by LEAs in ensuring—and documenting—that their students with disabilities are well prepared to move on from high school into the world of work or further education and training? Also, how are LEAs working with CTE schools (and others) to align the skills acquired by the students in CTE settings with Ohio's New Learning Standards?

Promising Technologies: What kinds of educational technology and e-Learning strategies (including blended learning) are yielding the most promising results for students with disabilities?

Finding Efficiencies: In what ways do LEAs—as well as ODE and others—ensure compliance with the myriad statutory and regulatory provisions for special education in ways that are most efficient and improve productivity?

Open Enrollment: What are the reasons for student movement and what are the consequences? Open enrollment was not a topic in the present study, but interviewees volunteered comments about this policy. Statements may reflect the unintended consequences of open enrollment. Some receiving (successful) LEAs were concerned that they were receiving increased numbers of needy students who will eventually exceed the teachers' ability to provide them with quality education. This process also could weaken community engagement, as the community may become dispersed. Alternatively, the parting (less successful) LEA perceives that the best students are leaving while the neediest students are staying (or being refused by the receiving LEAs). A longitudinal analysis that tracks students' movement across districts could document selectivity trends, especially for students with disabilities. Case studies of districts with open enrollment agreements and large demographic shifts in student populations could shed light on the reasons for student movement and its consequences.

Parent Choice: How does the school system support parents to be full partners in making Free Appropriate Public Education (FAPE) decisions in the best interests of their children? As parents are afforded more and more choices in terms of how and where their child with a disability will be best served (scholarships, vouchers, open-enrollments, community schools, home-schooling, etc.), what are the most salient considerations and values they use in making such choices? How do parents acquire and filter the information available to them to consider the array of possible choices of services for their children?

In summary

ODE and OCECD planned the OCECD Research Project with the purpose of enhancing understanding of the practices that are aligned with positive educational outcomes for students with disabilities. The research team conducted a rigorous, albeit exploratory, study that compares and contrasts practices used in successful and less successful school districts across the state. Findings were analyzed within and across typologies to highlight those practices that are unique to school districts where students with disabilities are attaining high performance levels on state assessments. Study findings, conclusions, and recommendations can be used as foundations for policies and practices that further successful education for students with disabilities in Ohio.

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APPENDIX A: RESOURCES

This appendix includes resources aligned with the Recommendations for Practice outlined in the final chapter, “Conclusions and Recommendations.” The resources are intended to support implementation of the study’s recommendations.

Leadership for Implementation of Evidence-based Practices

Citation	Description
<p><u>Implementation</u> Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). <i>Implementation research: A synthesis of the literature</i>. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute. The National Implementation Research Network (FMHI Publication #231) http://nirn.fmhi.usf.edu</p>	<p>The goal of this literature review was to synthesize research in the area of implementation and to determine what was known about relevant components and conditions of implementation. The study includes practical guidance such as a conceptual framework for implementation of defined practices and programs, core implementation components, summary of a meta-analysis of the effects of training and coaching on teachers' implementation in the classroom, and examples of different types of fidelity measures across programs.</p>
<p><u>Evidence-Based Practices</u> Coalition for Evidence-Based Policy. (2003). <i>Identifying and implementing educational practices supported by rigorous evidence: A user friendly guide</i>. Washington, D.C.: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance</p>	<p>This guide assists educational practitioners in evaluating whether an educational intervention is backed by rigorous evidence of effectiveness and in implementing evidence-based interventions in their schools or classrooms. The term <i>intervention</i> is defined as an educational practice, strategy, curriculum, or program. The guide is organized in four parts: A description of the randomized, controlled trial and why it is a critical factor in the establishment of "strong" evidence of an intervention's effectiveness; How to evaluate whether an intervention is backed by "strong" evidence of effectiveness; How to evaluate whether an intervention is backed by "possible" evidence of effectiveness; and Important factors to consider when implementing an evidence-based intervention in schools or classrooms.</p>
<p><u>What Works in Education</u> The What Works Clearinghouse (WWC) www.whatworks.ed.gov</p>	<p>The What Works Clearinghouse (WWC) was established in 2002 by the U.S. Department of Education's Institute of Education Sciences (IES) to provide educators, policymakers, and the public with a central, independent, and trusted source of scientific evidence of what works in education. To WWC reviews and reports on studies of interventions (education programs, products, practices, and policies) in selected topic areas. WWC reviews of evidence apply a set of standards that follow scientifically valid criteria for determining the effectiveness of these interventions. The WWC provides its findings in accessible, online reports, and include evaluation studies that pass the WWC standards for each identified intervention.</p>
<p><u>What Works in Education</u> Doing What Works (DWW) http://dww.ed.gov/</p>	<p>Doing What Works (DWW) is a Web site dedicated to assisting teachers in the implementation of effective educational practices. It contains practice guides developed by the U.S. Department of Education's Institute of Education Sciences (IES) that evaluate research on the effectiveness of teaching practices described in the guides and examples of possible ways this research may be used. Content for each practice is</p>

Leadership for Implementation of Evidence-based Practices

Citation	Description
	organized into four areas: Practice Summary (to gain an overview of a practice and see the issues it addresses), Learn What Works (understand the research base behind the practice), See How it Works (access examples of schools engaged in these practices), and Do What Works (use examples of tools to improve practice). Content areas include data-driven improvement, quality teaching, literacy, math and science, comprehensive support, and early childhood.
<p><u>What Works in Schools</u> Marzano, R. J. (2003). <i>What works in schools: Translating research into action</i>. Alexandria, VA: Association for Supervision and Curriculum Development http://www.ascd.org/publications/books/102271.aspx</p>	<p>This resource synthesizes 35 years of research to provide clear and unequalled insight into the nature of schooling. Factors that affect student achievement are defined and answers are offered to once-elusive questions such as how schools can set academic goals that do not underestimate student potential and how do all students have equal opportunity to learn given current curriculum requirements.</p>
<p><u>Leadership Practices</u> Marzano, R. J., Waters, T., & McNulty, B. (2005). <i>School leadership that works: From research to results</i>. Alexandria, VA: Association for Supervision and Curriculum Development. http://www.ascd.org/publications/books/105125.aspx</p>	<p>Drawing from 35 years of studies, the authors explain critical leadership principles that every administrator needs to know: (a) 21 leadership responsibilities that have a significant effect on student learning and the correlation of each responsibility to academic achievement gains; (b) The difference between first- and second-order change and the leadership responsibilities—in rank order—that are most important for each; (c) How to choose the right work to focus on to improve student achievement; (d) The advantages and disadvantages of comprehensive school reform models for improving student achievement; (e) 11 factors and 39 actions that help in taking a site-specific approach to improvement of student achievement; and (f) A five-step plan for effective school leadership that includes a strong team, distributed responsibilities, and 31 team action steps.</p>
<p><u>Leadership Practices</u> Keller-Allen, C. (2009). <i>Superintendent leadership: Promoting general and special education collaboration</i>. Alexandria, VA: National Association of State Directors of Special Education. http://eric.ed.gov/?id=ED529803</p>	<p>The spotlight on local education agencies (LEAs) in their efforts to improve the performance of all students, including historically underperforming subgroups, has increased scrutiny of LEA leadership. Superintendents' responsibilities have become more complex, stressful, and challenging as they are required to navigate new federal and state requirements and meet accountability expectations, all while answering to multiple, sometimes competing, constituencies. These changes came at a time when more superintendents were retiring, job turnover was increasing, and the candidate pool for experienced district administrators was shrinking. This study examined the role of the superintendent in promoting, developing, and sustaining a culture of</p>

Leadership for Implementation of Evidence-based Practices

Citation	Description
	collaboration between general and special educators throughout the LEA. Selected superintendents described their rationale for advancing a culture of collaboration, the strategies they implemented, the challenges they faced in doing so, and their recommendations to other superintendents.
<p><u>Leadership Practices</u></p> <p>Ohio’s Leadership Development Framework. (2013). <i>A Report on the work of the Ohio Leadership Advisory Council from 2007-2013</i> (2nd ed.). Columbus, Ohio: Buckeye Association of School Administrators and the Ohio Department of Education.</p> <p>http://www.ohioleadership.org/</p>	Ohio’s Leadership Development Framework is based on the concept of shared leadership. This framework promotes the use of collaborative structures—district leadership teams (DLTs), building leadership teams (BLTs), and teacher-based teams (TBTs)—to lead schools and share the responsibility for improving student achievement. The framework identifies six essential leadership practice areas that outline what the superintendent, DLT, BLT, and TBTs need to do to improve instructional practices and student performance: (a) Data and the decision-making process, (b) Focused goal-setting process, (c) Instruction and the learning process, (d) Community engagement process, (e) resource management process, and (f) governance process. The Ohio Leadership Advisory Council (OLAC) has created online learning modules to support implementation; these are any-time, any-place learning opportunities available free to Ohio educators. The modules include research and content from national experts, streaming video, Ohio exemplars of best practices, and more.
<p><u>Leadership Practices</u></p> <p>Morrison, J., & Magliocca, L. (2012). <i>Evaluation of Ohio’s state personnel development grant (SPDG): Final report</i>. Columbus, OH: Ohio Department of Education, Office for Exceptional Children.</p> <p>(Available from Ohio’s regional State Support Teams)</p>	Ohio Improvement Process: Level of Implementation Rubric A survey/self-reflection tool that includes (a) Use of collaborative structures and processes; (b) Setting expectations for the effective use of data; (c) Shared accountability across and within every level of the organization; and (d) Intentional use of resources to support achievement and instruction.
<p><u>Leadership Practices</u></p> <p>Telfer, D. M. (2012). <i>A synthesis of lessons learned: How districts used assessment and accountability to increase performance for students with disabilities as part of district-wide improvement</i>. Minneapolis, MN: University of Minnesota. National Center on Educational Outcomes.</p> <p>www.MovingYourNumbers.org</p>	This resource examines how school districts with vastly different demographics increase the performance of students with disabilities and other at-risk learners as part of whole-district reform efforts. Case studies of featured districts provide evidence that students with disabilities, like all other students, can learn at higher levels when adults focus their collective efforts on improving instructional practice, consistently implement core work across the district, and use assessment and accountability as a lever for ongoing system and student learning improvement. A tool is available for district self-assessment of implementation and scalability of six key practices: use data

Leadership for Implementation of Evidence-based Practices

Citation	Description
	well; focus your goals; shared instructional practices; implement deeply; monitor and provide feedback and support; inquire and learn.
<p><u>Instructional Practices</u> City, E. A., Elmore, R. F., Flarman, S .E., & Teitel, L. (2009). <i>Instructional rounds in education</i>. Cambridge, MA: Harvard Education Press: http://hepg.org/hep/book/99</p>	<p><i>Instructional Rounds in Education</i> is intended to help education leaders and practitioners develop a shared understanding of what high-quality instruction looks like and what schools and districts need to do to support it. Inspired by the medical-rounds model used by physicians, the authors have pioneered a new form of professional learning known as <i>instructional rounds networks</i>. From this process, educators develop a shared practice of observing, discussion, and analyzing learning and teaching.</p>
<p><u>Instructional Practices</u> Marzano, R. J. (2007). <i>The art and science of teaching: A comprehensive framework for effective instruction</i>. Alexandria, VA: Association for Supervision and Curriculum Development. http://www.ascd.org/publications/books/107001.aspx</p>	<p>Though classroom instructional strategies should clearly be based on sound science and research, knowing when to use them and with whom is more than an art. This resource presents a model for ensuring quality teaching that balances the need for research-based data with the equally vital need to understand the strengths and weaknesses of individual students.</p>
<p><u>Instructional Practices</u> Johnson, J. F., Perez, L., & Uline, C. L. (2013). <i>Teaching practices from America's best urban schools: A guide for school and classroom leaders</i>. Larchmont, NY: Eye on Education. http://eric.ed.gov/?id=ED538917</p>	<p>Lessons learned from recipients of the National Excellence in Urban Education Award sponsored by the National Center for Urban School Transformation (NCUST). Criteria for selection include evidence that a high percentage of SWDs are achieving greater proficiency in at least two academic subjects; percentage of SWDs demonstrating proficiency on state assessments, and SWDs demonstrating year-to-year achievement gains on state assessments or other indicators of success. Lead author Joe Johnson currently serves as Executive Director of NCUST and formerly served with ODE where he began Ohio's Schools of Promise Initiative.</p>

Multitiered Systems of Intervention and Supports

Citation	Description
<p><i><u>RtI and Closing the Achievement Gap</u></i></p> <p>Martinez, R. S., Nellis, L. M., & Prendergast, K. A. (2006). Closing the achievement gap series: Part II, response to intervention: Basic elements, practical applications, and policy recommendations. <i>Center for Evaluation and Education Policy: Education Policy Brief, 4</i>(8).</p> <p>http://eric.ed.gov/?id=ED495749</p>	<p>This policy brief provides readers with a broad overview of Response to Intervention (RtI). RtI refers to an integrated, school-wide method of service delivery across general and special education that promotes successful school outcomes for all students. This brief discusses the impetus behind RtI, which stems from flaws in the current special education system, describes the principal components of RtI, and highlights several model RtI programs around the country. Finally, the paper makes policy recommendations for the implementation of RtI in a sample state.</p>
<p><i><u>RtI and Role of Special Education and Special Educators</u></i></p> <p>Council for Exceptional Children. (2007). <i>CEC position on response to intervention (RTI): The unique role of special education and special educators</i>. Arlington, VA: Author.</p> <p>Retrieved from http://www.eric.ed.gov/PDFS/ED499403.pdf</p>	<p>The CEC recognizes the potential impact of RtI on the education of all children, roles of special educators, and the special education system. The RtI process is designed to identify struggling learners early, to provide access to needed interventions, and to help identify children with disabilities. It is a process intended to assist in identifying children with disabilities by providing data about how a child responds to scientifically based intervention as part of the comprehensive evaluation required for identification of any disability. Special educators play an integral role and have a strong and clear identity in the RtI process. To that end, CEC believes that any RtI process must include nonnegotiable guarantees related to special education and the key role of special educators.</p>
<p><i><u>RtI and Early Childhood</u></i></p> <p>The Division for Early childhood of the Council for Exceptional Children (DEC), National Association for the Education of Young Children (NAEYC), & National Head Start Association (NHSA). 2013. <i>Frameworks for response to intervention and early childhood: Description and implications</i>.</p> <p>http://www.naeyc.org/files/naeyc/RTI%20in%20Early%20Childhood.pdf</p>	<p>The purpose of this jointly developed paper was to define early childhood RtI frameworks and to promote a broader understanding and discussion of the topic.</p>

Multitiered Systems of Intervention and Supports

Citation	Description
<p><u>RtI and High School</u> Duffy, H. (2007). <i>Meeting the needs of significantly struggling learners in high school: A look at approaches to tiered intervention</i>. Washington, D.C.: National High School Center at American Institutes for Research. http://www.rti4success.org/pdf/high_school.pdf</p>	<p>This brief describes issues related to the implementation of RtI at the high school level and explains the supports needed to implement the RtI system. The resource provides an overview of RtI and describes specific components including a comparison of the standard treatment and problem solving approaches. The paper describes current research on RtI and secondary education and also provides a case study of a high school that implemented RtI.</p>
<p><u>Reading Interventions K-3</u> Scammacca, N., Vaughn, S., Roberts, G., Wanzek, J., & Targesen, J. (2007). <i>Extensive reading interventions in grades K-3: From research to practice</i>. Portsmouth, NH: Center on Instruction at RMC Research Corporation. http://www.centeroninstruction.org/extensive-reading-interventions-in-grades-k-3-from-research-to-practice</p>	<p>This report summarizes 12 peer-reviewed, quality research studies and synthesizes findings on the effectiveness of extensive reading interventions (comparing at least 100 instructional sessions) for struggling K-3 readers. It explains the related implications for practice for students with reading problems or learning disabilities in an RtI setting.</p>
<p><u>Reading Interventions/Adolescent Struggling Readers</u> Scammacca, N., Roberts, G., Vaughn, S., Edmonds, M., Wexler, J., Reutebuch, C. K., & Targesen, J. K. (2007). <i>Interventions for adolescent struggling readers: A meta-analysis with implications for practice</i>. Portsmouth, NH: Center on Instruction at RMC Research Corporation. http://www.centeroninstruction.org/interventions-for-adolescent-struggling-readers-a-meta-analysis-with-implications-for-practice</p>	<p>Results of this meta-analysis provide guidance for interventions for struggling adolescent readers and outlines major implications for practice. The report focuses on interventions designed to improve students' use of reading comprehension strategies. It also considers the impact of interventions that target improved reading vocabulary, accurate decoding of unfamiliar words in text, and increased reading fluency.</p>
<p><u>Math Interventions</u> Jayanthi, M., Gersten, R., & Baker, S. (2008). <i>Mathematics instruction for students with disabilities or difficulty learning mathematics: A guide for teachers</i>. Portsmouth, NH: Center on Instruction at RMC Research Corporation. http://www.centeroninstruction.org/mathematics-instruction-for-students-with-learning-disabilities-or-difficulty-learning-mathematics-a-guide-for-teachers</p>	<p>This guide for teachers is a companion piece to the meta-analysis <i>Mathematics Instruction for Students with Learning Disabilities or Difficulty Learning Mathematics: A Synthesis of the Intervention Research</i>. Based on the findings of this report, seven effective instructional practices were identified for teaching mathematics to K-12 students with learning disabilities. It describes these practices including recommendations from <i>The Final Report of the National Mathematics Advisory Panel</i>, specifies research-based recommendations for students with learning disabilities and for students who are experiencing difficulties in learning mathematics but are not identified as having a math learning disability.</p>

Multitiered Systems of Intervention and Supports

Citation	Description
<p><u>RtI Research and Implementation</u> Griffiths, A. J., Parson, L. B., Burns, M. K., VanDerHeyden, A., & Tilly, W. D. (2007). <i>Response to intervention: Research for practice</i>. Alexandria, VA: National Association of State Directors of Special Education (NASDSE). http://www.nasdse.org/portals/0/documents/rti_bibliography2.pdf</p>	<p>NASDSE provided a comprehensive review of research related to both traditional (special education eligibility determination) and more recent (general education inclusionary practices) approaches to RtI to inform local decision-making. Chapters include “Improving Core Instruction for All Students” (Tier 1 application), “Intensive Instruction” (Tier II application), “Intensive Instruction” (Tier 3 application), and approaches to RtI for “Social-Emotional Behavior Purposes” (Tiers 1, 2, and 3 application).</p>
<p><u>RtI Implementation (District Level)</u> Elliott, J., & Morrison, D. (2008) <i>Response to intervention: Blueprints for implementation (district-level edition)</i>. Alexandria, VA: NASDSE. http://www.nasdse.org/LinkClick.aspx?fileticket=H7i7vsEPEck%3D&tabid=36</p>	<p>RtI is defined as the practice of providing high quality instruction and interventions matched to student need, monitoring progress frequently to make decisions about changes in instruction or goals, and applying student response data to important education decisions. RtI should be applied to decisions in general, remedial and special education, creation of a well-integrated system of instruction/intervention guided by student outcome data. This district-level guide is organized around the following components: (a) Consensus-Building, (b) District Infrastructure-Building, and (c) District-Level Implementation.</p>
<p><u>RtI Implementation (School Level)</u> Kurns, S., & Tilly, W. D. (2008). <i>Response to intervention: Blueprints for implementation (school building-level edition)</i>. Alexandria, VA: NASDSE. http://www.nasdse.org/LinkClick.aspx?fileticket=0XXmIiiQOG0%3D&tabid=36</p>	<p>This school building-level guide (a companion to the district-level guide) addresses the following topics: Consensus Building, Infrastructure Building, and Implementation.</p>

Co-Teaching	
Citation	Description
<p><u>Co-Teaching</u> Scruggs, T. A., Mastropieri, M. A., & McDuffie, K. A. (2007). Co-teaching in inclusive classrooms: A metasynthesis of qualitative research. <i>Exceptional Children</i>, 73(4), 392-416 http://eric.ed.gov/?id=EJ817512</p>	<p>Thirty-two qualitative investigations of co-teaching in inclusive classrooms were included in this metasynthesis that employed qualitative research integration techniques. The study concluded that co-teachers generally support co-teaching, although a number of important needs were identified, including planning time, student skill level, and training; many of these needs were linked to administrative support.</p>
<p><u>Co-Teaching</u> Hanover Research. (2012). <i>The effectiveness of the co-teaching model: Literature review</i>. Washington, D.C.: Author. http://www.hanoverresearch.com/wp-content/uploads/2012/05/Effectiveness-of-Co-Teaching-Membership.pdf</p>	<p>The report provides an overview of the literature on co-teaching as a mode of instruction for children with and without disabilities. Co-teaching is described as method that draws on the strengths of both the general educator, who understands the structure, content, and pacing of the general education curriculum, and the special educator, who can identify unique learning needs of individual students and enhance curriculum and instruction to match these needs. This resource includes discussion of best practices in the implementation of co-teaching, as well as rubrics for measuring cooperative efficacy among co-teachers.</p>
<p><u>Co-Teaching</u> Gately, S. E., & Gately, F. J. (2001) Understanding co-teaching components. <i>Teaching Exceptional Children</i>, 33(4), 40-47. https://inclusived.wikispaces.com/file/view/Understanding+CoTeaching+Components.pdf</p>	<p>In this article, the authors describe the components of co-teaching and give examples of what the teacher interactions of that component may resemble at each of the developmental stages of co-teaching: beginning, compromise, and collaborative. Also included is the Co-teaching Rating Scale (CTRS) along with descriptions of how teachers and administrators can use it to develop appropriate objectives and directions for co-teachers.</p>
<p><u>Co-Teaching</u> National Dissemination Center for Children with Disabilities (NICHEY). (2011). <i>Co-teaching: General and special educators working together</i>. Washington, D.C.: Author. http://nichey.org/schoolage/effective-practices/coteaching</p>	<p>This practice-oriented Web page provides information about the following topics: various approaches to co-teaching; setting up shop together: tips, strategies, and checklists; PD modules on co-teaching, co-teaching blogs; and resources from state departments of education.</p>

Teacher Preparation and Professional Development

Citation	Description
<p><u>Special Education Teacher Preparation</u> Brownell, M. T., Sindelar, P. T., Kiely, M. T., & Danielson, L. C. (2010). Special education teacher quality and preparation: Exposing foundations, constructing a new model. <i>Exceptional Children</i>, 76(3), 357-377. http://cec.metapress.com/content/j18319315615h157/</p>	<p>This general article discusses changes in special education teacher preparation over time. The study presents historical development of special education, with discussion of political context, case law, and assumptions about teacher quality during the different eras. The article proposes changes to special education teacher preparation based in the RTI framework.</p>
<p><u>Teacher Preparation for Inclusive Services</u> Holdheide, L. R., & Reschly, D. J. (2008). <i>Teacher preparation to deliver inclusive services to students with disabilities</i>. Washington, D.C.: National Comprehensive Center for Teacher Quality. http://www.isbe.state.il.us/peac/pdf/using_student_growth_summary_0112.pdf</p>	<p>An innovation configuration for best practices organized around new essential components such as inclusive service models; collaborative teaming/planning; collaborative skills; access to the general education curriculum/universal design for learning; access to the general curriculum/differentiated instruction; learning strategies, classroom organization, and behavior management; scientifically based reading instruction; family involvement; and student self-determination and collaboration.</p>
<p><u>Teacher Evaluation Systems</u> Holdheide, L. (2013). <i>Inclusive design: Building educator evaluation systems that support students with disabilities: Special issues brief</i>. Washington, D.C.: Center on Great Teachers and Leaders at American Institutes for Research. http://www.gtlcenter.org/sites/default/files/GTL_Inclusive_Design.pdf</p>	<p>This <i>Special Issues Brief</i> addresses how challenges in teacher evaluation implementation fidelity, in many cases, can be reduced when a singular evaluation system for all teachers is in place. In particular, the study describes several advantages to employment of the same evaluation system for teachers of students with disabilities, including advantages related to inclusion, integration, collaboration, and shared understanding. Key design considerations and potential action steps are identified. In addition, each design consideration discussion includes links to case studies that illustrate implementation.</p>
<p><u>Teacher Evaluation Systems</u> Council for Exceptional Children. (2012). <i>The Council for Exceptional Children's position on special education teacher evaluation</i>. Arlington, VA: Author. http://cecblog.typepad.com/files/position_on_special_education_teacher_evaluation_background.pdf.</p>	<p>The complex role of the special education teacher is recognized as evaluations must take into account the population of children and youth and their range of exceptionalities taught and supported by special education teachers during a given school year. Evaluations also must be conducted by evaluators with expertise related to evidence-based service delivery models and individualized teaching practices and interventions in special education. Evaluators must understand how, when, and why these practices are implemented and the specific roles and responsibilities of special education teachers. Multiple indicators of special education teacher</p>

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	effectiveness may include: IEP development and implementation, development of lesson plans, skill in providing access to the general education curriculum, classroom environment and management, identification and implementation of appropriate instructional strategies, measures of student growth that are fair and accurate representations of both student growth and special education teacher's contribution to that growth, progress monitoring and assessment, collaboration with colleagues and families, contributions to the school community, and participation in ongoing PD. Attention also is directed to issues of reasonable case loads and paperwork responsibilities, competitive salaries and benefits, access to resources, and positive working conditions including collegial and administrative supports.
<p><u>Teacher Evaluation Systems</u></p> <p>Holdheide, L., Browder, D., Warren, S., Buzick, H., & Jones, N. (2012). <i>Summary of "Using Student Growth to Evaluate Educators of Students with Disabilities: Issues, Challenges, and Next Steps."</i> Washington, D.C.: State Special Education and Teacher Effectiveness Experts and Researchers, National Comprehensive Center for Teacher Quality (TQ Center), Council of Chief State School Officers, Education Testing Services (ETS). http://www.isbe.state.il.us/peac/pdf/using_student_growth_summary_0112.pdf</p>	<p>Holdheide et al. (2012) provide a summary of issues related to the use of student growth to evaluate educators of students with disabilities. Issues were generated by a national expert stakeholder group convened by the National Comprehensive Center for Teacher Quality, Council of Chief State Schools Officers, and Education Testing Services. Participants in the two-day forum concluded that little is known about the use of student growth as a component in teacher evaluation. This is the case for all students, but it is even more so for students with disabilities. Among other topics, implications for the use of Student Learning Objectives (SLOs) as a measure of teacher evaluation are explored. The similarity of the goal establishment and monitoring process to the development of IEPs is highlighted as a potential benefit. Other potential benefits cited include the fact that SLOs can be aligned to district and school improvement goals and that team-based SLOs can foster increased collaboration among general education and special education teachers.</p>
<p><u>Teacher Evaluation Systems</u></p> <p>Holdheide, L. R., Goe, L., Croft, A., & Reschly, D. J. (2010). <i>Challenges in evaluating special education teachers and English language learner specialists.</i> Washington, DC: National Comprehensive Center for Teacher Quality.</p>	<p>This research and policy brief addresses the challenges associated with evaluation of special education (SPED) and English language learner (ELL) specialists. The study presents results of a survey of more than 1,100 state and district directors of special education and interviews with administrators across the United States. The study found that most evaluation systems cannot differentiate among teachers based on</p>

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<p>http://www.tqsource.org/publications/July2010Brief.pdf</p>	<p>specialized roles or consider the challenges of working with at-risk students and specific contexts. Further, it notes that little to no research exists that directly links education and training of SPED teachers to student outcomes. The paper discusses typical measures used to evaluate teacher performance (e.g., observations, value-added models, portfolios, self-assessments) and outlines issues/challenges related their use with SPED and ELL teachers. Problems related to assessment of the performance of teachers in co-teaching contexts also are discussed. The paper presents numerous recommendations to make evaluation of SPED and ELL teachers more effective and valid. Practical examples of various approaches to SPED and ELL teacher evaluation are presented throughout.</p>
<p><u>Professional Development</u> Coggshal, J., Rasmussen, C., Colton, A., Milton, J., & Jacques, C. (2012). <i>Generating teaching effectiveness: The role of job-embedded professional learning in teacher evaluation: A research and policy brief</i>. Washington, D.C.: National Comprehensive Center for Teacher Quality. http://education.ky.gov/teachers/hieffteach/documents/generatingteaching%20effectiveness.pdf</p>	<p>This research and policy brief outlines the research on how teachers learn best and essential conditions for professional learning: A culture of trust, continuous learning, and collaborative inquiry; well-supported and effective coaches, teacher leaders, and principals; teacher teams such as content or grade-level teams, vertical cross-content teams, and data teams; facilitators to ensure that collaborative team time is purposeful and productive; common collaborative learning time; prioritization and allocation of resources; alignment with school and district goals and priorities, and instructional resources such as curriculum and assessments.</p>

Early Literacy	
Citation	Description
<p><u>Early Literacy Research</u></p> <p>Diamond, K. E., Justice, L. M., Siegler, R. S., & Snyder, P. A. (2013). <i>Synthesis of IES research on early intervention and early childhood education</i>. Washington, D.C.: IES National Center for Special Education Research, U.S. Department of Education.</p> <p>http://ues.ed.gov/ncser/pubs/20133001/</p>	<p>This synthesis describe what has been learned from research grants on early intervention and childhood education funded by the Institute of Education Sciences (IES) National Center for Education Research and National Center for Special Education Research and published in peer-reviewed outlets through June 2010. This synthesis describes contributions to the knowledge base produced by IES-funded research for four focal areas: (a) Early childhood classroom environments and general instructional practices, (b) Educational practices designed to impact children’s academic and social outcomes, (c) Measurement of young children’s skills and learning, and (d) Professional development for early educators. The authors also raise important questions for education research in the future, including: (a) What are the crucial features of high-quality early childhood education? (b) Which instruction is most effective for which children and under what circumstances? and (c) How do we effectively and efficiently support teachers in improving their instruction?</p>
<p><u>Early Literacy Research and Dyslexia</u></p> <p>Fiester, L. (2013). <i>Don’t “DYS” our kids: Dyslexia and the quest for grade-level reading proficiency</i>. New Haven, CT: Emily Hall Tremain Foundation and Campaign for Grade-Level Reading.</p> <p>www.tremainefoundation.org/content/dys</p>	<p>The Emily Hall Tremain Foundation and Campaign for Grade-Level Reading present a comprehensive report and action plan for helping children with learning disabilities reach grade-level reading proficiency. About 2.4 million children across the nation have been diagnosed with learning disabilities but the question remains, how successful is the U.S. education system in teaching these students to read? This report provides an overview of the history and progress in understanding and meeting the needs of children with dyslexia, as well as the persisting challenges that must be overcome to ensure that all students can read proficiently by the third grade. The document also highlights best practices and examples of solutions that are already working in communities. Based on interviews with nearly 30 experts, the report includes a collection of recommended actions for advancing this movement.</p>
<p><u>Early Literacy Research and Communities</u></p> <p>Fiester, L. (2013). <i>Early warning confirmed: A research update on third-grade reading</i>. Baltimore, MD: The Annie E. Casey Foundation.</p> <p>http://www.aecf.org/KnowledgeCenter/Publications.aspx?pub</p>	<p>Updated research in this report underscores the urgency of ensuring that children develop proficient reading skills by the end of third grade, especially those living in poverty or in impoverished communities. A follow-up to 2010’s “Early Warning: Why Reading by the End of third Grade Matters,” this report supports the link between reading deficiencies and broader social consequences, including</p>

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guid=%7B58440238-1626-476F-AFDA-1...	how living in poor households and high-poverty neighborhoods contributes to racial disparities in literacy skills in America and how low achievement in reading impacts an individual's future potential. Factors that contribute to third-grade reading proficiency include school readiness, chronic absence, summer learning, family stressors, and high-quality teaching.
<p><u>Early Literacy and Pre-K through Grade 3 Alignment</u></p> <p>The Pre-K Coalition. (2011). <i>Ensuring America's Future: Policy statements and recommendations from national education organizations.</i> http://www.nea.org/assets/docs/prekcoalitionreport2011.pdf</p> <p>The Pre-K Coalition. (2011). <i>Policy brief: The importance of aligning pre-K through 3rd grade.</i> http://www.centerforpubliceducation.org/Main-Menu/Pre-kindergarten/Pre-K-Coalition/Policy-Documents/Issue-brief-Dec-2011.pdf</p>	The Pre-K Coalition is a collaboration among the nation's most influential education groups [the American Association of School Administrators (AASA), American Federation of Teachers (AFT), Council of Chief State School Officers (CCSSO), National Association of Elementary School Administrators (NAESP), National Association of State Boards of Education (BASBE), National Education Association (NEA), and the National School Boards Association (NSBA)] to develop common principles for pre-K policy in federal legislation and build national awareness about the importance of pre-K education.
<p><u>Early Literacy and Pre-K through Grade 3 Alignment</u></p> <p>NAESP Foundation Task Force on Early Learning. (2010). <i>Building and supporting an aligned system: A vision for transforming education across the pre-K–grade three years.</i> Alexandria, VA: Author. http://www.naesp.org/transforming-early-childhood-education-pre-k-grade-3</p>	This report describes a standards-based pre-K–3 system in which: (a) All children and families have access to high-quality learning and care; (b) Programs are based upon evidence and data; (c) Teachers and leaders are well-trained, suitably compensated, and supported in the classroom; and (d) Children's learning and development are assessed and fostered in a truly comprehensive fashion to capture all the ingredients that contribute to their success in school and in life. To achieve this vision, the report recommends 10 action steps that address funding, federal and state policy integration, workforce development, and standards and assessments for young children to guide the hard work involved in aligning early childhood and elementary education.
<p><u>Early Literacy and College and Career Readiness</u></p> <p>ACT, Inc. (2013). <i>College and career readiness: The importance of early learning. ACT Policy Report.</i> Iowa City, IA: Author. http://www.act.org/research/policymakers/pdf/ImportanceofEarlyLearning.pdf</p>	This report reaffirms the importance of early learning and addresses the growing need for a system to support early learning in schools, as well as the obligation of educators and policymakers to promote public awareness of the advantages of early learning.

Postsecondary Readiness	
Citation	Description
<p><u><i>College/Career Readiness and Students with Disabilities</i></u> Brand, B., Valent, A., & Danielson, L. (2013). <i>Improving college and career readiness for students with disabilities</i>. Washington, D.C.: College and Career Readiness and Success Center at American Institutes for Research. http://www.ccrscenter.org/products-resources/improving-college-and-career-readiness-students-disabilities</p>	<p>This issue brief is intended to assist educators to develop a better understanding of strategies by which prepare students with disabilities and special needs for college and career. The brief provides context and background on the numbers of students with disabilities who are college- and career-ready, examines issues and strategies related to preparation and readiness for postsecondary education and careers, and includes examples of current programs and policies that help students with disabilities to successfully transition to college and career.</p>
<p><u><i>College/Career Readiness and Social/Emotional Learning</i></u> Dyminicki, A., Sambolt, M., & Kidron, Y. (2013). <i>Improving college and career readiness by incorporating social and emotional learning</i>. Washington, D.C.: College and Career Readiness and Success Center at American Institutes for Research. http://www.ccrscenter.org/products-resources/improving-college-and-career-readiness-incorporating-social-and-emotional</p>	<p>This issue brief is intended to assist educators in developing a better understanding of how social and emotional learning (SEL) can help students to be college- and career-ready. The brief provides a short description of SEL, why it is needed, and what it looks like in practice. In addition, examples of standards that support SEL at the federal and state levels, current SEL initiatives and programs, and outcomes and measures that can be used to assess SEL programming are described. A list of resources is included at the end of this brief for policymakers who are interested in learning more.</p>
<p><u><i>College/Career Readiness and Career Technical Education</i></u> Brand, B., Valent, A., & Browning, A. (2013). <i>How career and technical education can help students be college and career ready: A primer</i>. Washington, D.C.: College and Career Readiness and Success Center at American Institutes for Research. http://www.ccrscenter.org/products-resources/how-career-and-technical-education-can-help-students-be-college-and-career-ready</p>	<p>This brief provides an overview of the evolution of CTE in the United States, reviews what CTE looks like in practice, and highlights issues that face CTE in the field that must be overcome for it to become an impactful and wide-reaching strategy by which to prepare students for postsecondary success. The paper also discusses the importance of these programs in allowing students opportunities to acquire the competencies required in today's workplace and to learn about various careers by experiencing work and workplaces.</p>
<p><u><i>College/Career Readiness Initiatives</i></u> AIR (2012). <i>College and career development organizer</i>. Washington, D.C.: College and Career Readiness and Success Center at American Institutes for Research.</p>	<p>This college and career development organizer was created to synthesize and organize an increasingly complicated and crowded field of college and career readiness initiatives. The organizer, composed of three strands, can be used to map the efforts of SEAs and LEAs as well as the many organizations developed to research</p>

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<p>www.ccrscenter.org/ccrs-landscape</p>	<p>and provide support for college and career readiness. The organizer also can be used as a set of building blocks to help SEA, LEAs, schools, and other organizations to develop college and career readiness strategies and initiatives to address student needs. Stakeholders can use the components of the organizer to ensure they are designing comprehensive college and career readiness definitions and strategies that address all aspects of the field that are essential to their context. The paper includes three strands, each broken down into four increasingly specific segments organized by strands, threads, components, and examples.</p>
<p><u><i>College/Career Readiness and District Role</i></u> Author. (2013). <i>The district role in supporting college and career readiness for students: Perspectives from Long Beach, Albuquerque, and Philadelphia</i>. Washington, D.C.: College and Career Readiness and Success Center at American Institutes for Research. http://www.ccrscenter.org/products-resources/district-role-supporting-college-and-career-readiness-students</p>	<p>This brief builds upon recommendations from a 2009 Institute of Education Sciences (IES) <i>Practice Guide</i> that describes evidence-based practices that promote postsecondary access for high school students.</p>

Parent Partnerships

Citation	Description
<p><u>Parent Partnerships Research</u> Henderson, A., & Mapp, K. (2002). <i>A new wave of evidence: The impact of school, family, and community connections on student achievement</i>. Austin, TX: National Center for Family and Community Connections with Schools. www.sedl.org/connections/resources/evidence.pdf</p>	<p>This research synthesis examines key issues in the field of family and community connections with schools. The paper is a synthesis of 51 studies about the impact of family and community involvement on student achievement and effective strategies to connect schools, families, and community. The synthesis shows that for parent involvement to have an impact on achievement, schools must link parent activities to student learning goals and be respectful of differences among families.</p>
<p><u>Parent Partnerships and RtI</u> Woodruff, D., & Jennings, D. A. (2012). <i>RtI and family engagement: A construct for intentionality</i>. Washington, D.C.: National Center on Response to Intervention at American Institutes for Research. http://www.rti4success.org/webinar/rti-family-engagement-construct-intentionality-4651</p>	<p>In this webinar, authors Woodruff (co-director of the National Center on Response to Intervention) and Jennings (co-director of the Region 1 Parent Technical Assistance Center) provide an overview of research related to parent involvement in the RTI process. They provide a general overview of research related to family engagement, describe a construct for development of strategies for intentional family engagement in implementation of RtI, and discuss the importance of collaboration with OSEP-funded parent centers to address family engagement.</p>
<p><u>Parent Partnerships and Student Achievement</u> WestEd. (2013). Parents as partners in student achievement. <i>R&D Alert</i>, 14(1).. http://www.wested.org/online_pubs/rd-13-01.pdf</p>	<p>This Academic Parent-Teacher Teams (APTT) project puts a new twist on parent-teacher interaction. According to the article, 40 years of research confirm that parents' engagement in their children's education is one of the best ways to boost achievement. The article helps teachers to introduce parents to academic standards, share student performance data, and model field-tested activities for home practice. Parents are provided materials and asked to practice with their child a minimum of 30 minutes four times a week on specific academic skills.</p>