Title: Research on the achievement gap

Date: December 2013

Question: >> 1) What are the most common factors associated with the achievement gap (e.g., SES, race, English language proficiency)?
2) What are some interventions to close the achievement gap?

Response:

REL West staff have searched selected databases for relevant resources (see "Methods" section below), and developed a references list of resources that are relevant to the request. This memo includes:

- Reports and articles: Research reports and policy-oriented articles about factors associated with, as well as interventions for closing the achievement gap. The resources are organized into the following categories:
  1. Definition of Achievement Gap
  2. Factors Associated with the Achievement Gap
  3. Attempts at Narrowing the Achievement Gap
     A. School-based structural/institutional interventions
     B. Teacher-based instructional interventions
     C. Narrowing the achievement gap through technology
     D. Investment in early childhood
     E. Standards-based reform
- Relevant organizations that focus on the issue of the achievement gap in K–12 settings.

Citations include a link to a free online version when available. Citations are accompanied by an abstract, excerpt, or summary written by the author or publisher of the article. We have not done an evaluation of these resources or organizations, but rather provide them for your information only.

REPORTS AND ARTICLES

1. Definition of Achievement Gap

Carpenter, D. M., Ramirez, A., & Severn, L. (2006). Gap or gaps. challenging the singular definition of the achievement gap. *Education and Urban Society*, *39*(1), 113–127. Retrieved on December 3, 2013, from http://eric.ed.gov/?id=EJ745027

Abstract: For decades, researchers examined the 'achievement gap' between minority and nonminority students. This singular definition of achievement gap ignores important within-group differences. This article uses National Education Longitudinal Study (NELS:88) data to examine within-group differences and compares those across Latino, African American, and White populations. Results question the singular definition of achievement gap. Given the importance of how issues are defined, a singular definition of achievement gap may mean current policies miss the mark in raising achievement levels between and within groups.

Education Week. (July 7, 2011). Achievement gap. Retrieved on December 2, 2013, from http://www.edweek.org/ew/issues/achievement-gap/

Excerpt: … the achievement gap in education refers to "the disparity in academic performance between groups of students." The achievement gap shows up in grades, standardized-test scores, course selection, dropout rates, and college-completion rates, among other success measures. It is most often used to describe the troubling performance gaps between African-American and Hispanic students, at the lower end of the performance scale, and their non-Hispanic white peers, and the similar academic disparity between students from low-income families and those who are better off. In the past decade, though, scholars and policymakers have begun to focus increasing attention on other achievement gaps, such as those based on sex, English-language proficiency, and learning disabilities.

2. Factors Associated with the Achievement Gap

Berliner, D. C. (2009). *Poverty and potential: Out-of-school factors and school success.* Boulder, CO and Tempe, AZ: Education and the Public Interest Center & Education Policy Research Unit. Retrieved on December 2, 2013, from http://nepc.colorado.edu/files/PB-Berliner-NON-SCHOOL.pdf

Executive Summary (Excerpt): The U.S. has set as a national goal the narrowing of the achievement gap between lower income and middle-class students, and that between racial and ethnic groups. This is a key purpose of the No Child Left Behind Act, which relies primarily on assessment to promote changes within schools to accomplish that goal. However, out-of-school factors (OSFs) play a powerful role in generating existing achievement gaps, and if these factors are not attended to with equal vigor, our national aspirations will be thwarted. This brief details six OSFs common among the poor that significantly affect the health and learning opportunities of children, and accordingly limit what schools can accomplish on their own. (1) low birth-weight and non-genetic prenatal influences on children; (2) inadequate medical, dental, and vision care, often a result of

inadequate or no medical insurance; (3) food insecurity; (4) environmental pollutants; (5) family relations and family stress; and (6) neighborhood characteristics. These OSFs are related to a host of poverty-induced physical, sociological, and psychological problems that children often bring to school, ranging from neurological damage and attention disorders to excessive absenteeism, linguistic underdevelopment, and oppositional behavior.

The Education Trust. (2010). *Learning denied: The case for equitable access to effective teaching in California's largest school district*. Retrieved on December 2, 2013, from http://www.edtrust.org/sites/edtrust.org/files/ETW%20Learning%20Denied%20Report_0.pdf

Summary: The Education Trust releases the findings of a two-year-long study of data from the second largest school district in the nation, revealing profound inequities in access to effective teaching. The Education Trust finds that low-income students and students of color in the Los Angeles Unified School District (LAUSD) are less likely to be taught by the district's top teachers—the very teachers capable of closing the district's achievement gaps. These inequities are exacerbated by teacher mobility patterns and quality-blind layoffs.

Fantuzzo, J., LeBoeuf, W., Rouse, H., & Chen, C. (2012). Academic achievement of African American boys: A city-wide, community-based investigation of risk and resilience. *Journal of School Psychology*, *50*(5), 559–579.

Abstract: In light of persistent Black-White achievement gaps for boys, this study examined publicly monitored risks believed to be associated with being behind academically for an entire subpopulation of African American boys in a large urban public school district. Also examined were indicators of academic engagement hypothesized to mediate the relations between risks and low achievement. Findings indicated that the Black-White achievement gap for boys was matched by a comparable difference in risk experiences. Multilevel linear regression models controlling for poverty found that both the type and accumulation of risk experiences explained a significant amount of variation in reading and mathematics achievement for the subpopulation of African American boys. Socio-familial risks were related to the poorest academic outcomes. Academic engagement indicators significantly mediated relations between risks and achievement. Implications of this research for collective school and community actions to make race, gender, and place matter in educational public policy were discussed.

Hernandez, D. J. (2011). *Double jeopardy: How third-grade reading skills and poverty influence high school graduation*. Retrieved on December 2, 2013, from http://www.aecf.org/~/media/Pubs/Topics/Education/Other/DoubleJeopardyHowThirdGrade ReadingSkillsandPovery/DoubleJeopardyReport040511FINAL.pdf

Abstract: Educators and researchers have long recognized the importance of mastering reading by the end of third grade. Students who fail to reach this critical milestone often falter in the later grades and drop out before earning a high school diploma. This study relies on a unique national database of 3,975 students born between 1979 and 1989. The children's parents were surveyed every two years to determine the family's economic status and other

factors, while the children's reading progress was tracked using the Peabody Individual Achievement Test (PIAT) Reading Recognition subtest. The database reports whether students have finished high school by age 19, but does not indicate whether they actually dropped out. For purposes of this study, the researchers divided the children into three reading groups which correspond roughly to the skill levels used in the National Assessment of Educational Progress (NAEP): proficient, basic, and below basic. The children were also separated into three income categories: those who have never been poor, those who spent some time in poverty, and those who have lived more than half the years surveyed in poverty. The findings include: (1) One in six children who are not reading proficiently in third grade do not graduate from high school on time, a rate four times greater than that for proficient readers; (2) The rates are highest for the low, below-basic readers: 23 percent of these children drop out or fail to finish high school on time, compared to 9 percent of children with basic reading skills and 4 percent of proficient readers; (3) Overall, 22 percent of children who have lived in poverty do not graduate from high school, compared to 6 percent of those who have never been poor. This rises to 32 percent for students spending more than half of their childhood in poverty; (4) For children who were poor for at least a year and were not reading proficiently in third grade, the proportion that don't finish school rose to 26 percent. That's more than six times the rate for all proficient readers; (5) The rate was highest for poor Black and Hispanic students, at 31 and 33 percent respectively—or about eight times the rate for all proficient readers; (6) Even among poor children who were proficient readers in third grade, 11 percent still didn't finish high school. That compares to 9 percent of subpar third grade readers who have never been poor; (7) Among children who never lived in poverty, all but 2 percent of the best third-grade readers graduated from high school on time; and (8) Graduation rates for Black and Hispanic students who were not proficient readers in third grade lagged far behind those for White students with the same reading skills.

Mark, D. L. H. (2013). Academic achievement gap or gap of opportunities? *Urban Education, 48*(2), 335–343.

Abstract: Reviews the books, Creating the Opportunity to Learn: Moving from Research to Practice to Close the Achievement Gap by W. Boykin and P. Noguera (2011) and Start Where You Are, But Don't Stay There: Understanding Diversity, Opportunity Gaps, and Teaching in Today's Classrooms by H. Milner (2010). The first book addresses a crucial issue in teacher training and professional education—the need to train pre- and in-service teachers for racially diverse students in their classrooms. The book is divided into three main sections. The first section provides a framework for the case studies by operationalizing terms such as diversity and opportunity gaps, as well as introducing five interrelated tenets. Second, Milner highlights case studies of middle- and high-school teachers who capture the nexus of diversity, opportunity, and teaching in their practice. The third section offers recommendations for practice based on his year-long study and his experiences as an educator. In the second book, provide an understanding of the achievement gap in the United States and its impact on race. They offer a synthesis of research that explains and supports the interrelated factors for raising achievement and closing performance gaps. Their research includes data on student engagement, student guiding functions, and asset-focused factors on

interpersonal relationships, inter-subjectivity, and information-processing quality. The book concludes with applications and examples from schools that have made positive progress in improving the performance of students, especially students of color and those from low-socioeconomic backgrounds. The authors of both books approach the issues of the academic achievement gap from several perspectives, which take the reader from theory to practice and practice to theory.

Potter, D., & Roksa, J. (2013). Accumulating advantages over time: Family experiences and social class inequality in academic achievement. *Social Science Research*, *42*(4), 1018–1032.

Abstract: Children from different family backgrounds enter schooling with different levels of academic skills, and those differences grow over time. What explains this growing inequality? While the social reproduction tradition has argued that family contexts are central to producing class gaps in academic achievement, recent quantitative studies have found that family experiences explain only a small portion of those inequalities. We propose that resolving this inconsistency requires developing a new measure of family experiences that captures the continuity of exposure over time and thus more closely reflects the logic of the social reproduction tradition. Results using data from the Early Childhood Longitudinal Study–Kindergarten cohort (ECLS-K) show that, consistent with previous quantitative research, time-specific measures of family experiences have little explanatory power. However, cumulative family experiences account for most of the growing inequality in academic achievement between children from different social class backgrounds over time. These findings support claims from the social reproduction tradition, and contribute more broadly to the understanding of how family experiences contribute to social inequality.

Serbin, L. A., Stack, D. M., & Kingdon, D. (2013). Academic success across the transition from primary to secondary schooling among lower-income adolescents: Understanding the effects of family resources and gender. *Journal of Youth and Adolescence*, *42*(9), 1331–1347.

Abstract: Successful academic performance during adolescence is a key predictor of lifetime achievement, including occupational and social success. The present study investigated the important transition from primary to secondary schooling during early adolescence, when academic performance among youth often declines. The goal of the study was to understand how risk factors, specifically lower family resources and male gender, threaten academic success following this "critical transition" in schooling. The study involved a longitudinal examination of the predictors of academic performance in grades 7–8 among 127 (56 percent girls) French-speaking Quebec (Canada) adolescents from lower-income backgrounds. As hypothesized based on transition theory, hierarchical regression analyses showed that supportive parenting and specific academic, social and behavioral competencies (including spelling ability, social skills, and lower levels of attention problems) predicted success across this transition among at-risk youth. Multiple-mediation procedures demonstrated that the set of compensatory factors fully mediated the negative impact of lower family resources on academic success in grades 7–8. Unique mediators (social skills, spelling ability, supportive parenting) also were identified. In addition, the "gender gap" in performance across the transition could be attributed statistically to differences between boys and girls in specific competencies observed prior to the transition, as

well as differential parenting (i.e., support from mother) towards girls and boys. The present results contribute to our understanding of the processes by which established risk factors, such as low family income and gender impact development and academic performance during early adolescence. These "transitional" processes and subsequent academic performance may have consequences across adolescence and beyond, with an impact on lifetime patterns of achievement and occupational success.

3. Narrowing the Achievement Gap

(A) School-Based Structural/Institutional Interventions

Dolejs, C. (2006). *Report on key practices and policies of consistently higher performing high schools*. Washington, DC: National High School Center, American Institutes for Research. Retrieved on December 2, 2013, from http://www.betterhighschools.org/docs/ReportOfKeyPracticesandPolicies_10-31-06.pdf

Abstract: Much has been written recently about the ways many high schools are failing students, but much less has been written about the ways successful high schools manage to maintain standards of excellence for all students, pursuing high academic standards while still closing the achievement gap. This report focuses on successful high schools, highlighting the ways in which many superintendents, principals, and teachers are setting and meeting high expectations for all students. While these evidence-based practices can inform high schools nationwide, this report was developed specifically for state leaders, providing them with suggestions on how they may support initiatives that are linked with accelerated learning.

Edwards, L., Thornton, P., & Holiday-Driver, N. (2010). Left behind but not forgotten: School counselors' ability to help improve reading achievement. *Alabama Counseling Association Journa*l, *35*(2), 35–39. Retrieved on December 3, 2013, from http://files.eric.ed.gov/fulltext/EJ889699.pdf

Abstract: Examined is an outlook of the achievement gap among African-American and White students in school settings. Statistics and other pertinent information are evaluated to demonstrate how this is a growing problem in schools. An exploration of how school counselors can meet the demands and recognize the effects the achievement gap has on African-American students and interventions that should be put into place to help with this rising problem are essential in helping to close the achievement gap crisis. School improvement has been a main concern for presidents, governors, and other state policymakers for the past twenty years. As a result of this movement there have been numerous accomplishments, nevertheless major challenges continue to linger. One such challenge is the reading achievement gap between African American students and their European American counterparts (National Center for Education Statistics, 2007). This article provides a definition of the achievement gap, instructional efforts classroom teachers can utilize to help close the achievement gap, and shows how school guidance counselors can help African American students increase reading performance, thus helping to close the

achievement gap. Accountability and improving student achievement has also been a main focus of the school counseling profession.

Georges, A., Brooks-Gunn, J., & Malone, L. M. (2012). Links between young children's behavior and achievement: The role of social class and classroom composition. *American Behavioral Scientist*, *56*(7), 961–990. Retrieved on December 4, 2013, from http://journalistsresource.org/studies/society/education/children-behavior-achievement-social-class-classroom-composition

Abstract: A growing number of studies examine the influence of classroom behavior on teaching and individual children's behavior. However, limited work has examined the effects of classroom behavior on academic achievement. The present study used 14,537 children in 2,109 classrooms from the Early Childhood Longitudinal Study-Kindergarten Class of 1998–99 (ECLS-K) to examine the association between attention, aggressive behavior, and achievement at two levels—the child and classroom. Children with low attention, alone or in combination with aggressive behavior, made fewer gains in test scores during kindergarten. The achievement gap between children with low attention and those without was larger than those based on low-income status or race/ethnicity. Additionally, having more children in the classroom with low attention was negatively associated with achievement gains. No similar association was found for the number of children with high aggression. The authors discuss avenues for teacher training and intervention to facilitate attention.

Williams, S. M., & Houck, E. A. (2013). The life and death of desegregation policy in Wake County public school system and Charlotte-Mecklenburg schools. *Education and Urban Society*, *45*(5), 571–588.

Abstract: The state of North Carolina is one of few states in the South in which two large districts committed to desegregating schools in the early 1970s. However, the state's two largest districts, Charlotte-Mecklenberg Schools (CMS) and Wake County Public School System (WCPSS) have experienced ups and downs in their policy commitment to desegregated schools. This article utilizes a cross-case policy analysis to examine levels of segregation in CMS and WCPSS over a 10-year period. In addition, the authors examine school finance data to determine whether district spending and local and federal contributions have an effect on student outcomes in CMS and WCPSS. The authors also compare district outcomes against the backdrop of student assignment policy within each district. Findings indicate that despite spending mechanisms, both districts have become more segregated over time and that the achievement gap has narrowed between the districts' students.

(B) Teacher-Based Instructional Intervention

Bowen, N. K., Wegmann, K. M., & Webber, K. C. (2013). Enhancing a brief writing intervention to combat stereotype threat among middle-school students. *Journal of Educational Psychology*, *105*(2), 427–435. Retrieved on December 2, 2013, from http://eric.ed.gov/?id=EJ1007954

Abstract: Experimental research has demonstrated both the deleterious effects of negative stereotypes about ability on academic performance and the relative ease with which stereotypes can be countered in educational settings. The extent to which stereotypes contribute to the achievement gap between American students from dominant social and economic groups and students from other groups is not precisely known, but the potential of brief, inexpensive interventions targeting stereotype threat to reduce the gap is worthy of further examination. Although researchers studying brief social psychological interventions sometimes mention the importance of the context in which interventions occur, they have not included manipulations of the environment in their interventions. In the current experimental study, a test of the effects of a brief self-affirming writing assignment was conducted in a new sample of middle-school students (n = 132), and an environmental enhancement to the writing exercise was tested (n = 274). Consistent with previous findings, the self-affirming intervention reduced the average decline in Social Studies grades over the school year compared with a neutral condition (effect size, ES, 0.57). The combination of the affirming writing assignment with an environmental enhancement had superior effects to the writing assignment alone (ES 0.53).

Reddy, D. M., Pfeiffer, H. M., Fleming, R., Ports, K. A., Pedrick, L. E., Barnack-Tavlaris, J., & Swain, R. A. (2013). "U-pace" instruction: Improving student success by integrating content mastery and amplified assistance. *Journal of Asynchronous Learning Networks*, *17*(1), 147–154. Retrieved on December 3, 2013, from http://files.eric.ed.gov/fulltext/ED540734.pdf

Abstract: "U-Pace," an instructional intervention, has potential for widespread implementation because student behavior recorded in any learning management system is used by "U-Pace" instructors to tailor coaching of student learning based on students' strengths and motivations. "U-Pace" utilizes an online learning environment to integrate content mastery with Amplified Assistance (instructor-initiated, individually tailored feedback on concepts not yet mastered and constructive support that every student receives via email weekly or more often as needed). Evaluation findings for "U-Pace" instruction revealed that compared to conventional, face-to-face instruction, "U-Pace" instruction was associated with greater academic success for all students and reductions in the achievement gap for "disadvantaged" students. Additionally, "disadvantaged" "U-Pace" students showed improvements in the rate of content mastery and intrinsic motivation. Consistent with these indicators of improvement in self-regulated learning skills, "U-Pace" students reported greater improvements in their time management and study skills, greater control over their learning and a greater sense of achievement than conventionally-taught students. The convergence of findings from student reports, performance measures recorded within the

learning management system, and objectively determined grades suggests "U-Pace" instruction holds promise for higher education.

Sherman, D. K., Hartson, K. A., Binning, K. R., Purdie-Vaughns, V., Garcia, J., Taborsky-Barba, S., & Cohen, G. L. (2013). Deflecting the trajectory and changing the narrative: How self-affirmation affects academic performance and motivation under identity threat. *Journal of Personality and Social Psychology*, *104*(4), 591–618.

Abstract: To the extent that stereotype and identity threat undermine academic performance, social psychological interventions that lessen threat could buffer threatened students and improve performance. Two studies, each featuring a longitudinal field experiment in a mixed-ethnicity middle school, examined whether a values affirmation writing exercise could attenuate the achievement gap between Latino American and European American students. In Study 1, students completed multiple self-affirmation (or control) activities as part of their regular class assignments. Latino American students, the identity threatened group, earned higher grades in the affirmation than control condition, whereas White students were unaffected. The effects persisted 3 years and, for many students, continued into high school by lifting their performance trajectory. Study 2 featured daily diaries to examine how the affirmation affected psychology under identity threat, with the expectation that it would shape students' narratives of their ongoing academic experience. By conferring a big-picture focus, affirmation was expected to broaden construals, prevent daily adversity from being experienced as identity threat, and insulate academic motivation from identity threat. Indeed, affirmed Latino American students not only earned higher grades than nonaffirmed Latino American students but also construed events at a more abstract than concrete level and were less likely to have their daily feelings of academic fit and motivation undermined by identity threat. Discussion centers on how social-psychological processes propagate themselves over time and how timely interventions targeting these processes can promote well-being and achievement.

(C) Narrowing the Achievement Gap through Technology

Culatta, R. (2012). From innovation clusters to datapalooza: Accelerating innovation in educational technology. *EDUCAUSE Review*, *47*(6), 24–28. Retrieved on December 4, 2013, from http://www.educause.edu/ero/article/innovation-clusters-datapalooza-accelerating-innovation-educational-technology

Abstract: Education in the United States is entering a very exciting moment. For the first time, all of the digital stars are aligning in such a way that the technology is available to design truly transformational learning experiences. The ubiquity of inexpensive and powerful mobile devices is creating the potential for all students to learn at any time and in any location. Increased wired and wireless broadband is creating the potential for learners to engage and interact with peers and experts around the world. A proliferation of data from digital learning activities is creating the potential to leverage "big data" and learning analytics for personalizing learning. All of these elements are combining to create the potential for this to become education's Internet moment. To take advantage of the

energizing technological promise to improve learning, one needs to determine how to accelerate the rate at which new learning tools and techniques are developed and implemented. By accelerating the pace of innovation in educational technology, one will have the opportunity to close the achievement gap, improve national competitiveness, and drive economic growth.

Fairlie, R. W. (2012). Academic achievement, technology and race: Experimental evidence. *Economics of Education Review*, *31*(5), 663–679. Retrieved on December 2, 2013, from http://www.editlib.org/p/68676

Abstract: Although a large literature explores the achievement gap between minority and non-minority students, very little is known about whether disparities in access to technology are partly responsible. Data from the first-ever field experiment involving the random provision of free computers to low-income community college students for home use are used to explore whether home computers are beneficial to minority students. I find that minority students receiving free computers achieved better educational outcomes than the control group that did not receive free computers. Minority students may have benefitted more from receiving free computers because of fewer alternatives for accessing home computers due to lower rates of computer ownership among family, friends, and relatives. Implications for the achievement gap and policy are discussed.

Keengwe, J., & Hussein, F. (2013). Computer-assisted instruction: A case study of two charter schools. *International Journal of Information and Communication Technology Education,* *9*(1), 70–79. Abstract retrieved on December 4, 2013, from http://www.irma-international.org/article/computer-assisted-instruction/76317/

Abstract: The purpose of this study was to examine the relationship in achievement gap between English language learners (ELLs) utilizing computer-assisted instruction (CAI) in the classroom, and ELLs relying solely on traditional classroom instruction. The study findings showed that students using CAI to supplement traditional lectures performed better than the students relying solely on traditional classroom instruction. In addition, using CAI to supplement traditional lectures helped the charter schools to close the educational achievement gap of their students. Based on the findings, there is need for teachers to move past traditional learning, and learn new technology skills in order to incorporate sound technology-enhanced instructional strategies to support student learning.

(D) Investment in Early Childhood

Chang, M. (2012). Academic performance of language-minority students and all-day kindergarten: A longitudinal study. *School Effectiveness and School Improvement*, *23*(1), 21–48. Abstract retrieved on December 4, 2013, from http://eric.ed.gov/?id=EJ956582

Abstract: This longitudinal study examined the effect of all-day kindergarten programs on the academic achievement of students from racial language minority and low socioeconomic class. The study employed a series of 3-level longitudinal multilevel analyses using a

nationally representative database, the Early Childhood Longitudinal Study (ECLS). The study showed that Hispanic dual-language-speaking students who attended all-day kindergarten narrowed the achievement gap from Hispanic English-only students during kindergarten. The results also showed that Black and Asian dual-language-speaking students, when they attended all-day kindergarten, displayed a significant gain in the growth of performances. The positive effects of all-day kindergarten were pronounced for Black and Asian language-minority students who were from low social classes. These results have implications for policy decisions and support the need for all-day programs for language-minority students.

Frede, E., & Barnett, S. W. (2011). Why pre-K is critical to closing the achievement gap. *Principal, 90*(5), 8–11. Retrieved on December 4, 2013, from http://eric.ed.gov/?id=EJ964850

Abstract: The recently released results of the 2009 Program for International Student Assessment (PISA) comparison of educational achievement across 65 countries has brought renewed attention to the achievement gap and recommended changes to improve U.S. performance. The U.S. was well down in the middle of the pack for reading, math, and science while Shanghai, a Chinese city with a population equal to that of New York, was at the top of the leader board. If American schools are going to close the achievement gap and move toward the top of the international achievement comparisons, widespread access to high-quality preschool will have to be one of the reforms that schools implement. If principals take the steps outlined in this article, they will shortly find test scores rising, grade retention falling, and special education loads might even decline.

Herbert, M. (2012). A running start for ELLs. *District Administration*, *48*(6), 52–57. Retrieved on December 4, 2013, from http://www.districtadministration.com/article/running-start-ells

Abstract: One in four students under the age of six comes from an immigrant family in which at least one parent does not speak English. Traditionally, states such as Nevada, California, New Mexico, Arizona, and Texas have served the vast majority of English language learner (ELL) students, although the surging growth of this demographic—now 5.5 million students—can be seen nationwide in new "gateway" states, including South Carolina, Indiana, Arkansas, and Virginia, which are attracting more immigrant families. It is almost inevitable that every teacher across the nation will encounter an ELL student during his or her career if it hasn't happened already. As this population continues to swell, the achievement gap between ELLs and their non-ELL peers continues to widen. Many educators and legislators point to early childhood programs as a solution. There is a vast body of research linking students' performance in their early years to their success in the K12 arena. Achievement patterns in language and reading are established largely in the period from birth through the end of the primary grades. Researchers have also linked early learning to various long-term benefits, including high employment and lower crime rates, compared to those who don't have access. Early learning programs help bridge the gaps in school readiness, and it's in those younger years when the brain is best suited for language acquisition.

Sticht, T. G. (2012). Getting it right from the start: The case for early parenthood education. *Education Digest: Essential Readings Condensed for Quick Review*, *77*(9), 11–17. Retrieved on December 4, 2013, from http://files.eric.ed.gov/fulltext/EJ943722.pdf

Abstract: The idea that families need to provide enriching educational activities is not new. In 1908, Edmund Burke Huey, regarded as "one of the foremost leaders" in educating children with learning disabilities, wrote, "The school of the future will have as one of its important duties the instruction of parents in the means of assisting the child's natural learning in the home." This insight was just one of many in his classic work *The Psychology and Pedagogy of Reading*, a 500-page book so highly regarded that it was reprinted by the MIT Press in 1968 and again by the International Reading Association in 2009. Today, a substantial body of scientific evidence supports Huey's call for the instruction of parents in the means of improving children's learning at home, and therefore their learning at school. Much of this evidence comes from the best research in early childhood education and, in particular, one recurring finding: the most effective early childhood education programs include "early parenthood education." The results of studies of major early childhood education programs suggest that some of the long-term academic and social outcomes of early childhood education result not so much from the direct education of the children, but rather from education provided to highly disadvantaged parents. Changes in parenting help explain why relatively short-term education programs for children could sustain them through school, and into adulthood. Better parenting provides a long-term educational intervention for children. In this article, the author takes a closer look at why Huey concluded that schools would need to teach many parents to facilitate learning at home. As Huey understood—and cognitive scientists have since demonstrated—literacy follows oracy, so parents who foster their young children's listening, speaking, vocabulary, and knowledge are also fostering success in school.

(E) Standards-Based Reform

Schmidt, W. H., & Burroughs, N. A. (2013). Springing to life: How greater educational equality could grow from the Common Core mathematics standards. *American Educator*, *37*(1), 2–9. Retrieved on December 4, 2013, from http://files.eric.ed.gov/fulltext/EJ1006207.pdf

Abstract: In America, education has long been viewed as the main instrument for achieving equality of opportunity. Despite many reform efforts over the past several decades, the U.S. educational system has patently failed to ensure equal access for all to the essential knowledge, skills, problem-solving abilities, and reasoning abilities that are necessary to succeed. Instead, American schools exhibit pervasive inequality. Pervasive inequality is a bold claim, but that's the inescapable conclusion of more than 20 years of examining mathematics and science standards, student achievement, textbooks, standardized tests, and classroom content coverage. In mathematics, for instance, students are exposed to widely varying content not only across states and school districts but within schools. Such inequities in content coverage deny students equal learning opportunities. By the time they enter middle and high school, those students fortunate enough to have been challenged with rigorous, focused, and coherent content in the early grades are placed into courses that continue to

challenge them, while their peers who were not exposed to such content are tracked into lower-level courses. And so the differences in learning opportunities that contribute to the achievement gap only continue to grow. These problems aren't found only in lowest-performing schools; the "typical" U.S. student does not receive the content coverage needed to compete with students in other nations. In this article, the authors move from demonstrating the existence of pervasive inequality to considering what to do about it. In particular, they examine the prospects for the Common Core State Standards for Mathematics (CCSS-M) to reduce inequalities in opportunity to learn. They discuss why the CCSS-M "could" provide greater equality of educational opportunity, and they offer some ideas about how to overcome the principal obstacles to successful implementation.

RELEVANT ORGANIZATIONS

The Education Commission of the States (ECS)
From the ECS State Policy Database: Student Achievement—Closing the Achievement Gap
http://www.ecs.org/ecs/ecscat.nsf/WebTopicView?OpenView&Count=-1&RestrictToCategory=Student+Achievement--Closing+the+Achievement+Gap

From the website: This database is made possible by your state's fiscal support of the Education Commission of the States (ECS). Most entries are legislative, although rules/regulations and executive orders that make substantive changes are included. Every effort is made to collect the latest available version of policies; in some instances, recent changes might not be reflected. For expediency purposes minimal attention has been paid to style (capitalization, punctuation) and format.

The Education Trust
http://www.edtrust.org

From the website: The Education Trust promotes high academic achievement for all students at all levels—pre-kindergarten through college. Our goal is to close the gaps in opportunity and achievement that consign far too many young people—especially those from low-income families or who are black, Latino, or American Indian—to lives on the margins of the American mainstream.

Minority Student Achievement Network
http://msan.wceruw.org

From the website: The Minority Student Achievement Network (MSAN) is a national coalition of school districts that have come together to study achievement gaps that exist in their districts between students of color and their white peers. Since 1999 MSAN has worked to discover strategies to change school practices that keep these achievement gaps in place. Our member districts work collaboratively to conduct and publish research, analyze policies, and examine practices that affect the academic performance of students of color.

The Promising Practices Network

http://www.promisingpractices.net

From the website: The Promising Practices Network (PPN) website is a unique resource that offers credible, research-based information on what works to improve the lives of children and families.

Sometimes referred to as a "best practices" site or a "model program" site, PPN is both of those things and much more. In addition to providing summaries of effective programs in our programs that work section, PPN also features Issue Briefs that summarize the current research on various topics, as well as Expert Perspectives, where child policy experts answer our visitors' most pressing questions on a variety of topics. PPN also links to additional research information in all areas related to child well-being, including their physical and mental health, academic success, and economic security. To promote successful implementation of best practices and model programs, PPN also screens and posts evidence-based information on effective Service Delivery.

Methods

Keywords and Search Strings Used in the Search

Search keywords for the first question: "Achievement Gap" AND ("Indicators" OR "Factors") AND "K–12"

Search keywords for the second question: "Achievement Gap" AND ("Reform" OR "Interventions") AND "K–12"

Search of Databases

ERIC, EBSCO, Google, and Google Scholar

Criteria for Inclusion

When REL West staff review resources, they consider—among other things—four factors:

- **Date of the Publication:** The most current information is included, except in the case of nationally known seminal resources.

- **Source and Funder of the Report/Study/Brief/Article:** Priority is given to IES, nationally funded, and certain other vetted sources known for strict attention to research protocols.

- **Methodology:** Sources include randomized controlled trial studies, surveys, self-assessments, literature reviews, and policy briefs. Priority for inclusion generally is given to randomized controlled trial study findings, but the reader should note at least the following factors when basing decisions on these resources: numbers of participants (Just a few? Thousands?); selection (Did the participants volunteer for the study or were they

chosen?); representation (Were findings generalized from a homogeneous or a diverse pool of participants? Was the study sample representative of the population as a whole?).

- **Existing Knowledge Base:** Although we strive to include vetted resources, there are times when the research base is limited or nonexistent. In these cases, we have included the best resources we could find, which may include newspaper articles, interviews with content specialists, organization websites, and other sources.