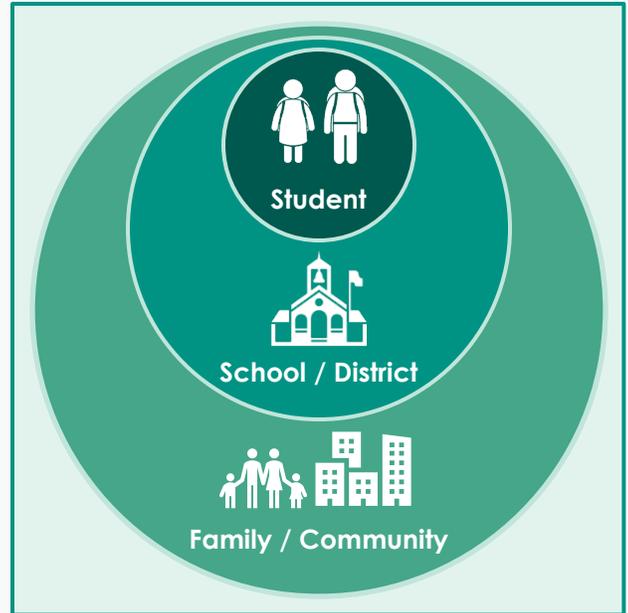# FACTORS INFLUENCING STUDENT LEARNING

SCHOOL-BASED VS. OUT-OF-SCHOOL FACTORS

The factors influencing students' achievement and educational outcomes are multifaceted, complex, and interconnected. Students' personal attributes and aptitudes, their social interactions with peers, teachers, and their families, and larger familial and societal structures (e.g., socioeconomic status, school quality, community problems) all impact student learning to varying degrees.[1] For example, risk factors associated with students' families—such as poverty, familial conflict, or poor parental supervision—and with the community-at-large—such as crime, violence, or limited public resources—can adversely impact student learning. Comparatively, school-based protective factors like effective teachers and the provision of academic, social, and emotional supports can positively impact student learning.[2]

Levels of Student Achievement Factors

Source: South Dakota State University[3]

Factors influencing student learning fall into two categories: ***school-based factors*** **and** ***out-of-school factors.*** School-based factors are those within the school's or district's nexus of control (e.g., curriculum design, instructional practices, teacher quality), whereas out-of-school factors are those which the school or district has limited or no control over (e.g., family income, parenting style, crime rates).[4] Both protective and risk factors can be present within school-based and out-of-school contexts. Awareness of the distinctions between these categories and knowledge of how to promote protective factors and mitigate the impacts of risk factors are important assets for PK-12 educators, from district superintendents to teachers to operations staff members.[5] Research identifies over 250 distinct factors or activities that influence student achievement, with a full listing available **here**.[6]

Sample of School-Based and Out-of-School Factors Impacting Student Learning

SCHOOL-BASED FACTORS		OUT-OF-SCHOOL FACTORS		
Teacher Quality	**Academic Setting**	**Students**	**Home/Family**	**Community**
Professional Development	Curriculum Implementation	Disability Status	Socioeconomic Status	Crime
Instructional Practices	Instructional Resources	First Language	Parent-Child Relationships	Community Infrastructure
Teacher Expectations	School Climate	Physical and Mental Health	Parents' Educational Attainment	Population Demographics
Cultural Responsiveness	Multi-Tiered Systems of Support (MTSS)	Developmental Differences	Household Status	Inequality

Source: Multiple[7]

Determinants of Achievement Which Can Be Influenced by Schools

Cultural Responsiveness

Instructional Rigor

School Climate

School-Family Collaboration

School Leadership

Social-Emotional Learning

Standards-Based Curricula

Teacher Expectations

Teacher Practices

Teacher Qualifications

Source: Multiple[13]

WHICH FACTORS ARE MOST IMPACTFUL?

Often, educators and the general public believe that teachers are the single most important influence on student achievement. However, **research findings qualify that teachers are the most impactful *school-based* factor, but not the most important factor overall.** Several out-of-school factors "exert more influence overall on student achievement than any factors inside the school."[8] Opportunity gaps resulting from out-of-school factors—such as those caused by racial inequality, limited socioeconomic opportunities, and disparities in parents' educational attainment—can create tremendous barriers to students' learning.[9]

Some research indicates that, relative to school-based factors such as teachers, out-of-school factors can have impacts four to eight times in magnitude.[10] Specifically, research finds that **most variations in student achievement outcomes are the result of individual student characteristics and aspects of family background such as socioeconomic status, race, and parents' level of educational attainment.**[11] Many teachers also recognize that poverty, familial sources of stress, and additional out-of-school factors represent major barriers to student success.[12] Despite the prevalence of out-of-school factors' influence on student learning, education policy discussions and district and school actions often emphasize improvements to teacher quality and their ability to design strong curricula and deliver effective instruction, with the recognition that educators may only be able to, at best, exert peripheral control over many out-of-school factors.[14]
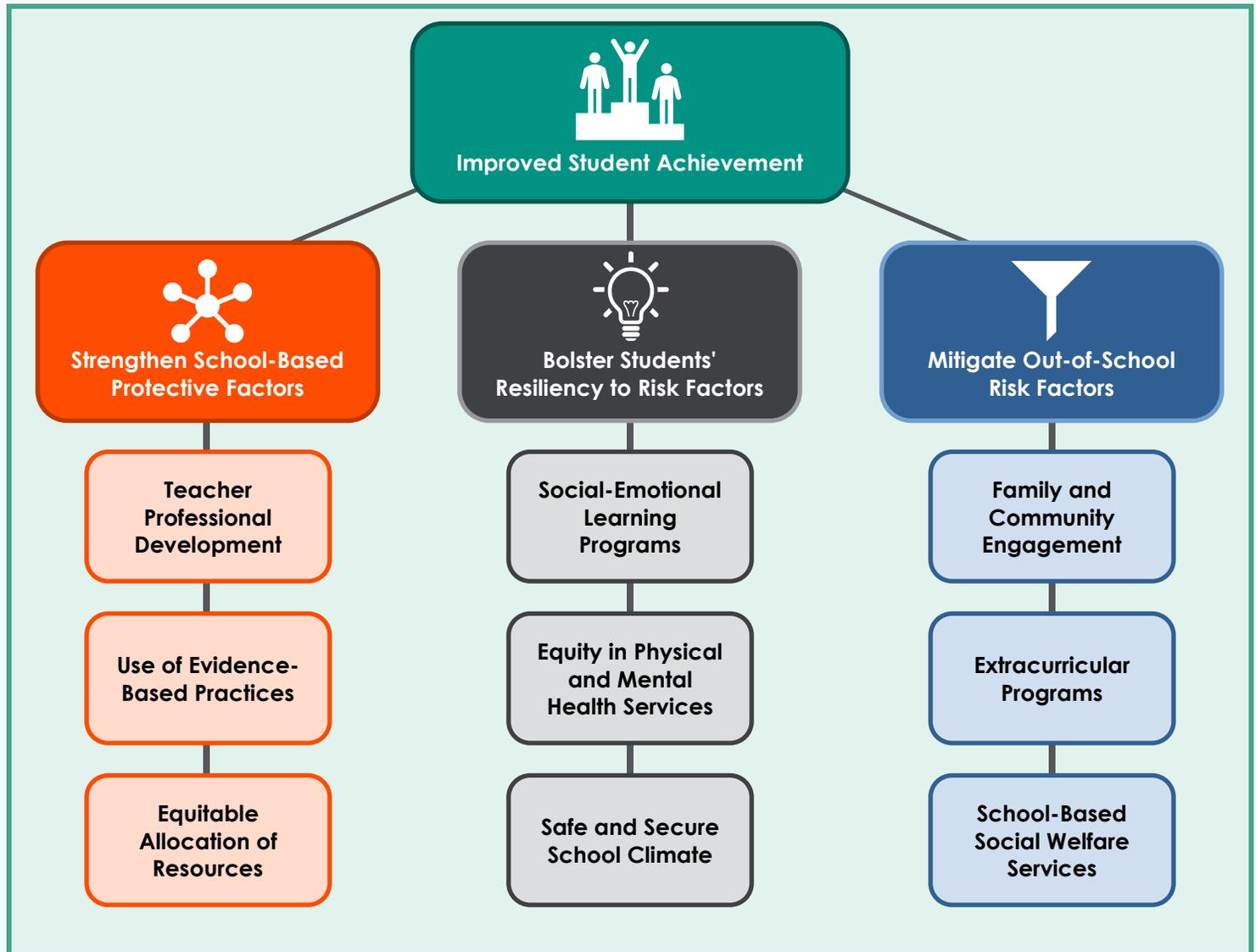
Districts and schools—while doing their best to mitigate the effect of out-of-school risk factors—should promote improvements to teacher quality including their ability to utilize evidence-based best practices.[15] Because teaching is the most effective factor impacting student learning upon which districts and schools can exert direct control, quality teaching practices should be at the core of all educational operations.[16] Indeed, research estimates that teachers "have two to three times the impact of any other school factor, including services, facilities, and even leadership."[17]

Moreover, educators should not discount their ability to assist students. While students' achievement may be adversely impacted by out-of-school risk factors, school-based factors can offset some of these effects to improve student outcomes. Out-of-school factors represent a challenge to student learning, but not one that is deterministic of students' ability to succeed.[18]

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HOW CAN SCHOOLS PROMOTE STUDENT ACHIEVEMENT WITHIN THEIR NEXUS OF CONTROL?

While experts and existing research acknowledge the positive impacts that effective teachers can have on students, the educational field continues to "untangle important aspects of these relationships, including the specific ways in which quality teaching operates, the degree to which it drives learning, and how effectiveness evolves as teachers progress through their careers."[19] In addition to strengthening school-based protective factors around teacher effectiveness, **districts and schools should seek ways to provide additional and more impactful supports that directly promote learning and fortify students against the adverse effects of out-of-school risk factors.**[20]

A Framework to Improve Student Achievement

Improved Student Achievement

Strengthen School-Based Protective Factors

- Teacher Professional Development
- Use of Evidence-Based Practices
- Equitable Allocation of Resources

Bolster Students' Resiliency to Risk Factors

- Social-Emotional Learning Programs
- Equity in Physical and Mental Health Services
- Safe and Secure School Climate

Mitigate Out-of-School Risk Factors

- Family and Community Engagement
- Extracurricular Programs
- School-Based Social Welfare Services

Source: Multiple[21]

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ENDNOTES

1. Bertolini, K., A. Stremmel, and J. Thorngren. "Student Achievement Factors." College of Education and Human Sciences, South Dakota State University, 2012. pp. 1–2. https://files.eric.ed.gov/fulltext/ED568687.pdf
2. [1] "Risk and Protective Factors." Check and Connect | University of Minnesota, 2017. http://checkandconnect.umn.edu/docs/Info_RiskProtectiveFactors.pdf [2] "Risk and Protective Factors." Youth.Gov. https://youth.gov/youth-topics/youth-mental-health/risk-and-protective-factors-youth
3. Figure adapted from: Bertolini, Stremmel, and Thorngren, Op. cit., p. 2.
4. "Identifying Factors That Contribute to Achievement Gaps." National Education Association. http://www.nea.org//home/17413.htm
5. [1] "School Connectedness: Strategies for Increasing Protective Factors Among Youth." Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, 2009. pp. 3, 5, 10–15. https://www.cdc.gov/healthyyouth/protective/pdf/connectedness.pdf [2] "Section 1: Identification of Risk and Protective Factors." Florida Department of Education. pp. 1–3. http://www.fldoe.org/core/fileparse.php/7771/urlt/0084829-sec2.pdf
6. "The Research of John Hattie." Visible Learning Plus | Corwin. https://www.visiblelearningplus.com/content/research-john-hattie
7. Figure adapted from: [1] Hattie, J. "250+ Influences on Student Achievement." Visible Learning Plus | Corwin, November 2017. pp. 1–2. https://visible-learning.org/wp-content/uploads/2018/03/VLPLUS-252-Influences-Hattie-ranking-DEC-2017.pdf [2] "Identifying Factors That Contribute to Achievement Gaps," Op. cit. [3] Bertolini, Stremmel, and Thorngren, Op. cit., pp. 3–5. [4] Miksic, M.Y. "The Persistent Achievement Gaps in American Education." Institute for Education Policy, Johns Hopkins University, March 20, 2014. http://edpolicy.education.jhu.edu/the-persistent-achievement-gaps-in-american-education/ [5] "Out-of-School Factors Influence Student Achievement." National Education Association. http://www.nea.org//home/31005.htm [6] Smith, B. "Why Is There A Huge Academic-Achievement Gap Between White Students and Their Peers of Color?" Center for Education Policy Analysis, Stanford University, May 4, 2016. https://cepa.stanford.edu/news/why-there-huge-academic-achievement-gap-between-white-students-and-their-peers-color [7] Berliner, D.C. "Poverty and Potential: Out-of-School Factors and School Success." Education Policy Research Unit, Arizona State University, and Education and the Public Interest Center, University of Colorado, March 2009. p. 2. https://nepc.colorado.edu/sites/default/files/PB-Berliner-NON-SCHOOL.pdf
8. Sawchuk, S. "What Studies Say About Teacher Effectiveness." Education Writers Association. p. 1. https://www.ewa.org/sites/main/files/file-attachments/teachereffectiveness-final.pdf
9. Hung, M. et al. "Exploring Student Achievement Gaps in School Districts Across the United States." Education and Urban Society, March 27, 2019. pp. 13–14. Accessed via SAGE Journals.
10. "Teachers Matter: Understanding Teachers' Impact on Student Achievement." RAND Corporation, 2012. https://www.rand.org/pubs/corporate_pubs/CP693z1-2012-09.html
11. Sawchuk, Op. cit., pp. 1–2.
12. Worrell, G. "We Surveyed the 2015 State Teachers of the Year." Scholastic, May 19, 2015. http://edublog.scholastic.com/post/we-surveyed-2015-state-teachers-year
13. Figure adapted from: [1] McCoach, D.B. et al. "Examining the Unexpected: Outlier Analyses of Factors Affecting Student Achievement." Journal of Advanced Academics, 21:3, 2010. pp. 427, 430–433, 452–454. Accessed via SAGE Journals. [2] Breger, L. "Poverty and Student Achievement in Chicago Public Schools." The American Economist, 62:2, 2017. pp. 206, 213. Accessed via SAGE Journals. [3] Wayne, A.J. and P. Youngs. "Teacher Characteristics and Student Achievement Gains: A Review." Review of Educational Research, 73:1, 2003. pp. 89, 95–106. Accessed via SAGE Journals. [4] Boyd, D.J. et al. "Teacher Preparation and Student Achievement." Educational Evaluation and Policy Analysis, 31:4, December 2009. p. 416. Accessed via SAGE Journals. [5] Jeynes, W.H. "A Meta-Analysis on the Factors That Best Reduce the Achievement Gap." Education and Urban Society, 47:5, 2015. pp. 525–526, 546–547. Accessed via SAGE Journals. [6] Dell'Angelo, T. "The Power of Perception: Mediating the Impact of Poverty on Student Achievement." Education and Urban Society, 48:3, 2016. pp. 245–247, 253–254. Accessed via SAGE Journals. [7] Ratcliff, N.J. et al. "Causes of and Solutions to the Achievement Gap: Teachers' Perceptions." Coastal Carolina University and Institute of Education Sciences, U.S. Department of Education. pp. 98–99, 101. https://files.eric.ed.gov/fulltext/EJ1095644.pdf [8] Jensen, E. "Teaching with Poverty in Mind: Chapter 2, How Poverty Affects Behavior and Academic Performance." Association for Supervision and Curriculum Development, November 2009. http://www.ascd.org/publications/books/109074/chapters/How-Poverty-Affects-Behavior-and-Academic-Performance.aspx [9] "Common Causes of the Achievement Gaps." Corwin. https://us.corwin.com/en-us/nam/equity-causes-of-achievement-gaps [10] Poliakoff, A.R. "Closing the Gap: An Overview." Association for Supervision and Curriculum Development, January 2006. http://www.ascd.org/publications/newsletters/policy-priorities/jan06/num44/toc.aspx
14. "Teachers Matter: Understanding Teachers' Impact on Student Achievement," Op. cit.
15. Goldhaber, D. "In Schools, Teacher Quality Matters Most: Today's Research Reinforces Coleman's Findings." Education Next, 16:2, 2016. https://www.educationnext.org/in-schools-teacher-quality-matters-most-coleman/
16. "Teacher Effectiveness." Center for Education Policy Research, Harvard University. https://cepr.harvard.edu/teacher-effectiveness
17. "Teachers Matter: Understanding Teachers' Impact on Student Achievement," Op. cit.
18. Wiggan, G. "Race, School Achievement, and Educational Inequality: Toward a Student-Based Inquiry Perspective." Review of Educational Research, 77:3, September 2007. p. 322. Accessed via SAGE Journals.
19. Hightower, A.M. et al. "Improving Student Learning by Supporting Quality Teaching: Key Issues, Effective Strategies." Editorial Projects in Education, Inc., December 2011. p. 2. https://www.edweek.org/media/eperc_qualityteaching_12.11.pdf
20. [1] "Making the Case for Educating the Whole Child." Association for Supervision and Curriculum Development, 2012. pp. 3–13. http://www.wholechildeducation.org/assets/content/mx-resources/WholeChild-MakingTheCase.pdf [2] Darling-Hammond, L. and C.M. Cook-Harvey. "Educating the Whole Child: Improving School Climate to Support Student Success." Learning Policy Institute, September 2018. pp. 9–49. https://learningpolicyinstitute.org/sites/default/files/product-files/Educating_Whole_Child_REPORT.pdf

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21. Figure adapted from: [1] Hightower et al., Op. cit., pp. 10–12, 16–18. [2] Hassel, B.C. et al. "Closing Achievement Gaps in Diverse and Low-Poverty Schools: An Action Guide for District Leaders." Public Impact and Oak Foundation, 2018. pp. 14–22. https://publicimpact.com/wp-content/uploads/2018/08/Closing_Achievement_Gaps_in_Diverse_and_Low-Poverty_Schools.pdf [3] Mishra, V. and M. Puri. "Suggestive Strategies for Achieving Teacher Effectiveness." New York University. pp. 2–7. http://www.nyu.edu/classes/keefer/waoe/mohitvikrant.pdf [4] "Risk and Protective Factor Framework." Community Coalition for Healthy Youth. pp. 1–2. http://www.healthyyouth.org/documents/RiskandProtectiveFactorFrameworkoverview.pdf [5] "Risk and Protective Factor Scale Definitions." Center for School-Community Collaboration, Virginia Commonwealth University. https://cscc.soe.vcu.edu/prevention-clearinghouse/risk--protective-factors/risk--protective-factor-scale-definitions/ [6] Bireda, S. and J. Moses. "Reducing Student Poverty in the Classroom: School-Based Antipoverty Strategies the Federal Government Can Learn From and Act On." Center for American Progress, September 2010. pp. 8–11. https://cdn.americanprogress.org/wp-content/uploads/issues/2010/09/pdf/reducing_student_poverty.pdf

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