

# Evidence for Interventions from RIDE School Improvement Hub

The Rhode Island Continuous School Improvement Hub provides resources for school leaders on best practices and strategies in the areas of high quality curriculum and instruction, talent development and collaboration, and school climate and culture to support all schools in improvement efforts. In providing this document, the Title II team at RIDE is publishing both the strategies within each category that RIDE has identified as having evidence that meets ESSA's requirements, and the citations for the evidence itself. Our hope in doing so is to provide a resource for Title II coordinators as they work to ensure they are both using their Title II funds in ways that are likely to lead to improved outcomes, and as they ensure they are basing those decisions on evidence that is required under ESSA.

Before using this document, please note the following:

- This document should be used only after the LEA has completed its needs assessment process and is working to select interventions to fit those needs. The expenditure of Title II dollars should flow from what student and educator data identifies as a need. LEAs should not select interventions simply because there exists a strong evidence base for them if they do not meet the identified needs of the district or school.
- This document is not a comprehensive list of all possible interventions or evidence. It is a starting point that directs LEAs towards interventions that are particularly well grounded in evidence and align with the RIDE school improvement framework.
- The specifics of the research cited matters and must align appropriately with your identified activities. Please do not cite the research without also reviewing it so that you can be confident it is a good match for your use of Title II dollars.
- Note that not all of the high-level categories below correspond directly with allowable uses of Title II funds. For example, Implementing High Quality Curriculum Materials is listed below. Title II funds cannot be used to purchase curriculum materials. However, the evidence associated with this entry could be part of the evidence used to justify spending on professional learning grounded in high quality materials.



## Talent Development & Collaboration

Talent development and collaboration is an integral part of an education system that provides educators with opportunities to acquire and apply knowledge and skills to positively impact students' learning and well-being. Research shows that investing in talent development for beginning and experienced educators supports higher student achievement. These opportunities include regular feedback on educators' instructional practices, coaching experiences (mentoring or receiving), curriculum-specific professional learning, and improving collaboration with their peers. Talent development and collaboration can be managed and supported organically (e.g., common planning time, curriculum development) or through third-party professional support (e.g., conferences, facilitated projects and programs), but must have its anchor in research-based best practices.

### *Systematic Induction Program*

A systematic induction program can help to increase the effectiveness of beginning teachers. It is distinct from simply assigning someone a “mentor” who focuses on providing logistical and/or emotional support. In order to improve teacher practice and ultimately affect student outcomes, an induction program should have the following elements: a rigorous selection process for induction coaches; release time for coaches in order to fulfill coaching duties; a ratio of coach to new teacher of no more than 1:15; intensive training for coaches (both to start and on-going); the use of formative assessment data to guide work with new teachers; a focus on instructional practice, equity, and universal access; well-structured 1:1 meetings between coaches and new teachers for 90 minutes 3-4 times per month.

- Schmidt, R., Young, V., Cassidy, L., Wang, H., & Laguarda, K. (2017). *Impact of the New Teacher Center's New Teacher Induction Model on Teachers and Students*. Menlo Park, CA: SRI International.

### *Instructional Coaching*

Instructional coaching has been shown to be an effective lever for increasing the effectiveness of teachers. While much of the evidence has focused on the impact of literacy coaching, evidence also exists that coaching can be effective across content areas and may include a focus on classroom management. At its core, coaching must center on repeated cycles of observation and feedback. Operationally, instructional coaching should consist of 1:1 or small group sessions between coach and teacher which occur at least once every two weeks for a sustained period of time. The coaching should be specific to the context of teacher's classrooms



and should include deliberate practice of discrete skills. Coaching may be paired with other forms of professional learning to increase their effectiveness. Coaches themselves also require training and ongoing feedback to become proficient in this form of professional learning.

- Kraft, M. A., & Blazar, D. (2014). *Improving Teachers' Practice across Grades and Subjects: Experimental Evidence on Individualized Coaching*. Providence, RI: Brown University.
- Neuman, S. B., & Cunningham, L. (2009). The impact of professional development and coaching on early language and literacy instructional practices. *American Educational Research Journal*, 46(2), 532-566.
- Biancarosa, G., Bryk, A. S., & Dexter, E. R. (2010). Assessing the value-added effects of literacy collaborative professional development on student learning. *The Elementary School Journal*, 111(1), 7-34.
- Campbell, P. F., & Malkus, N. N. (2011). The impact of elementary mathematics coaches on student achievement. *The Elementary School Journal*, 111(3), 430-454.

### *Curriculum-Specific Professional Learning*

An emerging body of evidence suggests that collaborative professional learning focused on implementing high quality instructional materials can have a positive impact on student achievement. Such professional learning is predicated on having a high-quality curriculum in place. It typically consists of activities such as deeply understanding the instructional materials, modeling core instructional practices that are part of the curriculum, and collaborating to solve common problems of practice with materials while staying true to their intent. It must be sustained over time and facilitated by people with appropriate expertise in the curriculum and content (likely including strong teacher-leaders).

- Jackson, C. K., & Makarin, A. (2016). *Simplifying Teaching: A Field Experiment with Online "Off-the-Shelf" Lessons*. National Bureau of Economic Research.
- Taylor, J. A., Getty, S. R., Kowalski, S. M., Wilson, C. D., Carlson, J., & Van Scotter, P. (2015). An efficacy trial of research-based curriculum materials with curriculum-based professional development. *American Educational Research Journal*, 52(5), 984-1017.

### *Providing Teachers Feedback on Instruction*

Evidence exists that providing teachers with clear feedback on their areas of strength and growth can have a significant impact on their ability to drive student achievement. While this may include formal evaluation systems, the impact of feedback has been documented in the



context of “low-stakes” or “no-stakes” settings as well. In the research literature on the impact of performance feedback, the feedback is grounded typically in an agreed-upon tool for measuring important elements of teacher practice. Educators received the feedback both via writing and through an in-person debrief session.

- Garet, M. S., Wayne, A. J., Brown, S., Rickles, J., Song, M., & Manzeske, D. (2017). The Impact of Providing Performance Feedback to Teachers and Principals. NCEE 2018-4001. *National Center for Education Evaluation and Regional Assistance*.
- Taylor, Eric S. and John H. Tyler. 2012. The Effect of Evaluation on Teacher Performance. *American Economic Review*, 102(7):3628-51.

## Improving Educator Collaboration

One aspect of an educator’s professional environment that has been linked to stronger student outcomes is the quality of the collaboration they experience with peers. Educators who report collaboration that is more extensive and helpful tend to improve at faster rates and produce stronger student outcomes. This collaboration typically happens in instructional teams and focuses on student learning, instruction/curriculum, and assessment. Note that the research in this area suggests that adequate time and resources (potentially in the form of trained facilitators and structured protocols) may be necessary to realize gains from investments in this area.

- Ronfeldt, M., Farmer, S. O., McQueen, K., & Grissom, J. A. (2015). Teacher collaboration in instructional teams and student achievement. *American Educational Research Journal*, 52(3), 475-514.
- Saunders, W. M., Goldenberg, C. N., & Gallimore, R. (2009). Increasing achievement by focusing grade-level teams on improving classroom learning: A prospective, quasi-experimental study of Title I schools. *American Educational Research Journal*, 46(4), 1006–1033.

## School Climate & Culture

School climate reflects how members of the school community experience the school: interpersonal relationships, educator practices, and physical/environmental organization. Efforts by school leaders to improve school climate and culture can lead to increased student engagement and learning, measurable through attendance, feedback, and assessment results. Social and emotional learning programs that engages not only students and educators, but families and the community as well, can improve students’ experience in school.



Implementation of school-wide positive behavior intervention and supports is a data-based, comprehensive approach that establishes practices to reinforce positive behavior for students. Improving a school's climate can utilize a variety of strategies – from practices to physical building changes – in order to increase students' feelings of safety, support, and their engagement with learning. Mental health first aid is a specific strategy aimed to increase educator and staff understanding and ability to support students who may be at risk for mental health disorders.

## *Social and Emotional Learning*

Effective social and emotional learning (SEL) programming provides students with opportunities to contribute to their communities, families with opportunities to enhance their children's social and emotional development, school personnel with ongoing professional development opportunities, and community groups with opportunities such as after-school and before-school programs in partnership with schools. Research studies using experimental designs with control groups have documented the positive effects of SEL programming on children of diverse backgrounds from preschool through high school in urban, suburban, and rural settings. Compared to control groups, children who have participated in SEL programs have significantly better school attendance records, less disruptive classroom behavior, like school more, and perform better in school. The research also indicates that children who have participated in SEL programs are less likely than children in control groups to be suspended or otherwise disciplined.

- Grant, S., et al. (2017). *Social and Emotional Learning Interventions Under the Every Student Succeeds Act: Evidence Review*. Santa Monica, CA: RAND Corporation. (see tables 5.1, 5.2, and 5.3 for specific strategies and programs and corresponding citation)
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D. & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405–432.
- Jones, D. E., Greenberg, M., & Crowley, M. (2015). Early Social-Emotional Functioning and Public Health: The Relationship Between Kindergarten Social Competence and Future Wellness. *American Journal of Public Health*, 105(11), 2283-2290.

## *Schoolwide Positive Behavior Intervention and Supports (PBIS)*

Research shows that implementation of a systems approach to establishing the social culture and behavioral supports is needed for all children in a school to achieve both social and academic success. PBIS is not a packaged curriculum, but an approach that defines core elements that can be achieved through a variety of strategies. At the primary core prevention



level, the elements include defining, teaching, and rewarding behavioral expectations; differentiated instruction for behavior; continuous collection and use of data for decision-making; and clearly defined consequences for undesirable behavior.

- Benner, G., Nelson, J.R., Sanders, E., & Ralston, N. (2012). Behavior intervention for students with externalizing behavior problems: Primary-level standard protocol. *Exceptional Children*, 78(2), 181-198.
- Bradshaw, C., Waasdorp, T., & Leaf P. (2012). Examining the variation in the impact of School-wide Positive Behavioral Interventions and Supports. *Pediatrics*, 10(5), 1136-1145.
- Ross, S., Romer, N., & Horner, R.H., (2012). Teacher well-being and the implementation of school-wide positive behavior interventions and supports. *Journal of Positive Behavior Interventions*, 14(2), 118-128.
- Bradshaw, C. P., Mitchell, M. M., & Leaf, P. J. (2010). Examining the effects of School-Wide Positive Behavioral Interventions and Supports on student outcomes: Results from a randomized controlled effectiveness trial in elementary schools. *Journal of Positive Behavior Interventions*, 12, 133-148.
- Horner, R., Sugai, G., Smolkowski, K., Eber, L., Todd, A., Nakasato, J., & Esperanza, J. (2009). A Randomized, Wait-List Controlled Trial of School-wide Positive Behavior Support in Elementary Schools. *Journal of Positive Behavior Interventions*, 11(3), 113-144.
- Bradshaw, C., Koth, C., Thornton, L., & Leaf, P. (2009). Altering school climate through School-wide Positive Behavioral Interventions and Supports: Findings from a Group-Randomized Effectiveness Trial. *Prevention Science*, 10, 100-115.
- Bradshaw, C., Koth, C., Bevans, K., Ialongo, N., & Leaf, P. (2008). The impact of school-wide positive behavioral interventions and supports (PBIS) on the organizational health of elementary schools. *School Psychology Quarterly*, 23(4), 462-473.

## School Climate Improvement

Research shows that a positive school climate is linked with student academic success, prosocial behaviors, increased graduation and attendance rates, reduced dropout rates, and higher rates of teacher satisfaction. Students who learn in positive learning environments that are safe, supportive, and engaging are more likely to improve academically, participate more fully in the classroom, and develop skills that will help them be successful in school and in life. The [School Climate Improvement Resource Package](#) includes a series of school climate tools, assessments, action guides, data interpretation methods and other resources to guide local practices to support school climate.

- Boccanfuso, C., & Kuhfeld, M. (2011). *Multiple responses, promising results: Evidence-based, nonpunitive alternatives to zero tolerance*. Washington, DC: Child Trends.





- MacNeil, A. J., Prater, D. L., & Busch, S. (2009). The effects of school culture and climate on student achievement. *International Journal of Leadership in Education*, 12(1), 73–84.
- Ripski, M. B., & Gregory, A. (2009). Unfair, unsafe, and unwelcome: Do high school students' perceptions of unfairness, hostility, and victimization in school predict engagement and achievement? *Journal of School Violence*, 8(4), 355–375.
- McNeely, C. A., Nonnemaker, J. M., & Blum, R. W. (2002). Promoting school connectedness: Evidence from the National Longitudinal Study of Adolescent Health. *Journal of School Health*, 72(4), 138–146.

## Mental Health First Aid

MHFA is a public education training program that can help individuals across the community understand mental illnesses and support timely intervention. The training teaches how to identify, understand and respond to signs of mental illnesses and substance abuse disorders, and provides the skills needed to reach out and provide initial help and support to someone who may be developing a mental health or substance use problem or experiencing a crisis.

- Svensson, B., & Hansson, L. (2014). Effectiveness of Mental Health First Aid Training in Sweden. A randomized controlled trial with a six-month and two-year follow-up. *PLOS ONE*, 9, 1-8.
- Mendenhall, A.N., Jackson, S.C., & Hase, S. (2013). Mental Health First Aid USA in a rural community: Perceived impact on knowledge, attitudes and behavior. *Social Work in Mental Health*, 11(6), 563-577.
- Borrill, J., & Kuczyńska, P. (2013). Evaluation of Youth Mental Health First Aid Training in the North-East of England. Available online from [MHFA England website](#).

## High Quality Instruction & Curriculum

Research shows that high quality instruction and curriculum are critical factors in student academic success. Studies show that students who are taught using high quality curriculum materials gain months of learning. When paired with instructional strategies that are responsive to students' individual academic and behavioral needs (such as multi-tiered systems of support), student learning and engagement increases. Throughout their education, students' exposure to consistent vocabulary instruction across all content areas increases their ability to comprehend and communicate. The strategies listed below can be applied for all content areas and have their roots in research across grade levels and student demographics.



## Implementing High Quality Curriculum Materials

Multiple research studies meeting criteria for ESSA Evidence Tiers I-III point to the impact high quality curriculum materials have on student achievement. Generally, moving towards high quality curriculum means adopting materials that align better with the scope and content of college and career ready standards. The provided curriculum has a significant impact on the content that is delivered to students and the manner in which it is taught. Trials establishing the efficacy of implementing high quality curriculum materials typically include a description of professional learning tied to those materials consisting of both initial training and ongoing implementation support. The curriculum evaluation site [EdReports](#) utilizes many of the same descriptions of what makes a curriculum high quality as is found in the body of research on this topic.

- Agodini, R., Harris, B., Atkins-Burnett, S., Heaviside, S., Novak, T., & Murphy, R. (2009). Achievement Effects of Four Early Elementary School Math Curricula: Findings from First Graders in 39 Schools. NCEE 2009-4052. *National Center for Education Evaluation and Regional Assistance*.
- Jackson, C. K., & Makarin, A. (2016). Simplifying Teaching: A Field Experiment with Online "Off-the-Shelf" Lessons. National Bureau of Economic Research.
- Taylor, J. A., Getty, S. R., Kowalski, S. M., Wilson, C. D., Carlson, J., & Van Scotter, P. (2015). An efficacy trial of research-based curriculum materials with curriculum-based professional development. *American Educational Research Journal*, 52(5), 984-1017.
- Borman, G. D., Dowling, N. M., & Schneck, C. (2008). A multisite cluster randomized field trial of Open Court Reading. *Educational Evaluation and Policy Analysis*, 30(4), 389–407.

## Multi-Tiered Systems of Support (MTSS)

Implementing multi-tiered academic and behavioral instructional supports within a system of collaborative data analysis and infrastructure supports to staff improves student outcomes. MTSS includes both academic and behavioral instructional interventions grounded in a review of school-wide, small group, and individual data to inform increasingly intensive levels of instructional support to students. MTSS also requires systemic infrastructure supports for staff to review data and deliver intervention at varying levels of intensity. Well-supported practices specific to content area include making sure math interventions are explicit and systematic, reading interventions are intensive, systematic and focused on foundational reading skills in small groups, and interventions for English Learners include small group instruction in literacy





and English language development. Well-supported behavioral interventions include instruction in socially and behaviorally appropriate skills to replace problem behaviors.

- Jitendra, A. K., Griffin, C. C., McGoey, K., Gardill, M. C., Bhat, P., & Riley, T. (1998). Effects of mathematical word problem solving by students at risk or with mild disabilities. *The Journal of Educational Research*, 91(6), 345–355.
- Gunn, B., Biglan, A., Smolkowski, K., & Ary, D. (2000). The efficacy of supplemental instruction in decoding skills for Hispanic and non-Hispanic students in early elementary school. *The Journal of Special Education*, 34(2), 90-103.
- Vaughn, S., Mathes, P., Linan-Thompson, S., Cirino, P., Carlson, C., Pollard-Durodola, S., Cardenas-Hagan, E., & Francis, D. (2006). Effectiveness of an English intervention for first-grade English language learners at risk for reading problems. *Elementary School Journal*, 107(2), 153–180.
- Daunic, A., Smith, S., Brank, E., & Penfield, R. (2006). Classroom based cognitive-behavioral intervention to prevent aggression: Efficacy and social validity. *Journal of School Psychology*, 44, 123–39
- Frey, K., Nolen, S., Van Schojack-Edstrom, L., & Hirschstein, M. (2005). Effects of a school-based social competence program: Linking children’s goals, attributions, and behavior. *The Journal of Applied Developmental Psychology*, 26, 171–200.

## Vocabulary Instruction across Content Areas

Explicit instruction around both general academic vocabulary and domain-specific vocabulary can have a significant impact on student outcomes. This instruction must include opportunities for students to learn new vocabulary by reading the words in context, using the words in writing, practicing speaking using the words, and listening to others use the words. This instruction can benefit students in multiple content areas. In the studies where this type of instruction is found to be effective, schools invest significant time to implement a structured program of vocabulary instruction. This type of instruction is beneficial for all students and can have particularly robust impacts on students who are English Language Learners.

- Lesaux, N. K., Kieffer, M. J., Faller, S. E., & Kelley, J. G. (2010). The effectiveness and ease of implementation of an academic vocabulary intervention for linguistically diverse students in urban middle schools. *Reading Research Quarterly*, 45(2), 196-228. doi:10.1598/RRQ.45.2.3
- Snow, C. E., Lawrence, J. F., & White, C. (2009). Generating knowledge of academic language among urban middle school students. *Journal of Research on Educational Effectiveness*, 2(4), 325-344. doi:10.1080/19345740903167042



- Vaughn, S., Martinez, L. R., Linan-Thompson, S., Reutebuch, C. K., Carlson, C. D., & Francis, D. J. (2009). Enhancing social studies vocabulary and comprehension for seventh-grade English language learners: Findings from two experimental studies. *Journal of Research on Educational Effectiveness*, 2(4), 297-324.  
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