Connecticut State Department of Education Evidence-Based Practice Guide
Supporting Local Education Agencies' (LEA) Use of ESSA Title Funds

On-Track Graduation

DRAFT

Under ESSA, there are four tiers, or levels of evidence. Throughout this guide, the level indicator key is used to identify the evidence level at a quick glance.

Tier	Evidence Level	Evidence Descriptor
1	Strong Evidence	Supported by one or more well-designed and well-implemented **randomized control experimental** studies.
2	Moderate Evidence	Supported by one or more well-designed and well-implemented **quasi-experimental** studies.
3	Promising Evidence	Supported by one or more well-designed and well-implemented **correlational** studies.
4	Demonstrates a Rationale	Practices that have a well-defined **logic model** or **theory of action**, are supported by research, and have some effort underway to determine their effectiveness.

Interventions applied under Title I, Section 1003 (School Improvement) are required to have strong, moderate, or promising evidence (Tiers 1-3) to support them. All other programs under Titles I-IV can rely on Tiers 1-4.

Suggested citation: Connecticut State Department of Education. (2018). *CSDE and ESSA Evidence-Based Spending Guide*.

Systems

The Connecticut State Department of Education adheres to research supporting systemic, multi-tiered approaches that simultaneously pursue schoolwide and targeted assistance supports focused on early identification of students at risk for dropping out or not graduating on time; personalized learning; challenging instruction that engages and connects students to their futures; and adult advocates who provide intensive, individualized support

Evidence-based practice and rationale	Grade band	Evidence level and source
Establish a data system or utilize the CSDE early indication tool to track individual student data and establish a continuum of interventions. *When students have two or more of the following risk factors, they are more likely to drop out: low academic achievement, poor attendance, emotional/behavior disorders, student mobility, parent and family difficulties, and high-risk behaviors.*	PreK-3 4-5	**Tier 3, Promising** Source: Elementary Programs for Dropout Prevention. (2011). Washington DC, DC: Hanover Research.
Monitor attendance, behavior and academic progress of all students and proactively intervene. *Provide intensive, individualized support to students who have fallen off track with attendance, behavior or academics and face significant challenges to success.*	6-9 9-12	**Tier 1, Strong** Source: Preventing Dropout in Secondary Schools (NCEE 2017-4028).
Assign a single, trained adult advocate, who supports struggling students. *This includes developing a menu of support options that advocates can use to support students and supporting advocates with ongoing professional learning opportunities and tools for tracking their work.*	6-8 9-12	**Tier 2, Moderate** Source: Preventing Dropout in Secondary Schools (NCEE 2017-4028).

Evidence-based practice and rationale	Grade band	Evidence level and source
Offer curricula and programs that connect schoolwork with college and career success. *This includes directly connecting schoolwork to students' options after high school; providing curricula and programs that help students build supportive relationships and teach students how to manage challenges; and regularly assessing student engagement to identify areas for improvement and targeting interventions to students who are not meaningfully engaged.*	6-8 9-12	**Tier 1, Strong** Source: Preventing Dropout in Secondary Schools (NCEE 2017-4028).
For schools with many at-risk students, create small, personalized communities to facilitate monitoring and support. *This includes creating teams of teachers with common groups of students; identifying a theme to build a strong sense of identify and community and to improve student engagement; and developing a schedule that provides common planning time and ample opportunities for staff to monitor and support students.*	6-8 9-12	**Tier 2, Moderate** Source: Preventing Dropout in Secondary Schools (NCEE 2017-4028).
By grade 9, ensure student awareness about what constitutes a college-ready curriculum. *Specifically, this means students complete Algebra 1 by the end of grade 9 and by graduation complete coursework in core academic and elective areas that make them minimally proficient to attend community college without remediation.*	9-12	**Tier 3, Promising** Source: Helping Students Navigate the Path to College: What High Schools Can Do.

Evidence-based practice and rationale	Grade band	Evidence level and source
Utilize assessment measures throughout high school so students are aware of their readiness for college. *Assist students in overcoming deficiencies as they are identified.*	**9-12**	**Tier 3, Promising** Source: [Helping Students Navigate the Path to College: What High Schools Can Do.](#)
Surround students with adults and peers who support their college-going aspirations. *This includes encouraging students to form academically oriented peer groups, allowing students to explore a variety of careers, and linking students to college-educated mentors.*	**9-12**	**Tier 3, Promising** Source: [Helping Students Navigate the Path to College: What High Schools Can Do.](#)
Engage and assist students in completing critical steps for college entry. *This includes activities to enhance students' ability to complete the college application process, assist in the college search, coordinating college visits and coursework in financial literacy as early as grade 9.*	**9-12**	**Tier 2, Moderate** Source: [Helping Students Navigate the Path to College: What High Schools Can Do.](#)
Increase families' financial awareness in order to more effectively plan for college. *This includes assisting student with financial aid applications and workshops for parents prior to grade 12.*	**9-12**	**Tier 2, Moderate** Source: [Helping Students Navigate the Path to College: What High Schools Can Do.](#)
School Transitional Programs *This includes systemically identifying students at risk for potential problems at predictable school transitions from middle to high school (grades 8 to 9) and supporting these students through the transitions.*		**Tier 3, Promising** Source: [Developing School Supports to Reduce School Failure Among At-Risk High School](#) **Tier 4. Demonstrates a Rationale** Source: [Effective Ninth-Grade Transition Programs Can Promote Student Success](#)

Instructional Practice

The Connecticut State Department of Education adheres to research that supports instructional practice, delivered through multiple approaches; that engages students in challenging curriculum aligned to students' future education, training and careers; and provides interventions when students struggle.

Evidence-based practice and rationale	Grade band	Evidence level and source
Provide intensive and individualized interventions for struggling adolescent readers. *Interventions must be provided by trained specialists and include explicit instruction in phonemic awareness, decoding, fluency, vocabulary and comprehension.*	6-8 9-12	**Tier 1, Strong** Source: Improving Adolescent Literacy: Effective Classroom and Intervention Practices (NCEE 2008-4027).
Engage students in relevant literacy experiences and creating conditions to increase conceptual learning. *Conditions include student goal setting, self-directed learning, and collaborative learning.*	6-8 9-12	**Tier 1, Strong** Source: Improving Adolescent Literacy: Effective Classroom and Intervention Practices (NCEE 2008-4027).
Implement project- or problem-based learning. *Project- and problem-based learning increases long-term retention of content, helps students perform as well as or better than traditional learners in high-stakes tests, improves problem-solving and collaboration skills, and improves students' attitudes toward learning.*	6-8 9-12	**Tier 3, Promising** Source: Strobel, J., & van Barneveld, A. (2009). When is PBL More Effective? A Meta-synthesis of Meta-analyses Comparing PBL to Conventional Classrooms. Interdisciplinary Journal of Problem-Based Learning, 3(1).
	6-8 9-12	**Tier 3, Promising** Source: Walker, A. , & Leary, H. (2009). A Problem Based Learning Meta Analysis: Differences Across Problem Types, Implementation Types, Disciplines, and Assessment Levels. Interdisciplinary Journal of Problem-Based Learning, 3(1).

Evidence-based practice and rationale	Grade band	Evidence level and source
Restructure the school into career academies. *Career academies allow students to take both career-related and academic courses while acquiring work experience in partnership with local employers and have positive effects on students completing school.*	**9-12** **9-12**	**Tier 1, Strong** Source: [What Works Clearinghouse Intervention Report, Career Academies (Rep.). (2015). Retrieved May 7, 2018, from What Works Clearinghouse](#). **Tier 1, Strong** Source: [Kemple, J. J. (2008, June). Career Academies: Long-term impacts on labor market outcomes, educational attainment, and transitions to adulthood (Rep.). Retrieved May 7, 2018, from MDRC website: https://www.mdrc.org/sites/default/files/full_50.pdf](#)
Provide dual enrollment opportunities for all students. *Dual enrollment programs allow high school students to take college courses and earn college credits while still attending high school. These programs have positive effects on students completing high school and potentially positive effects for staying in school and for high school attendance.*	**9-12**	**Tier 1, Strong** [What Works Clearinghouse Intervention Report Dual Enrollment Programs (Rep.). (2017). Retrieved May 7, 2018 from What Works Clearinghouse.](#)
Provide ACT/SAT test preparation and coaching programs for all students. *Familiarizing students with the format of the tests, introducing general test-taking strategies, and introducing specific drills for content practice have a positive effect on general academic achievement for high school students.*	**9-12**	**Tier 1, Strong** Source: [What Works Clearinghouse Intervention Report ACT, SAT Test Preparation and Coaching Program (Rep.). (2016). Retrieved May 7, 2018 from What Works Clearinghouse.](#)

Professional Learning

Because evidence-based professional learning is necessary for effective implementation of the strategies and interventions to support the improvement of on-track/graduation rates, the Connecticut State Department of Education supports the evidence-based models of teacher professional learning that adhere to the Connecticut Standards for Professional Learning.

Evidence-based practice and rationale	Grade band	Evidence level and source
Provide professional learning support for instructors working with students in out-of-school programs. *Ongoing professional learning and ongoing instructional support must be provided to ensure effectiveness of out-of-school programs.*	PreK-3 4-5 6-8	**Tier 2, Moderate** Source: What Works Clearinghouse Practice Guide, Structuring Out-of-school Time to Improve Academic Achievement, Recommendation 3. (NCEE 2009-012).
Support adult advocates working with at-risk students with ongoing professional learning and tools for tracking their work. *Suggested responsibilities for advocates and student case managers, key qualifications for an advocates, sample support menus, sample monitoring tools and suggestions for professional learning for advocates are offered.*	6-8 9-12	**Tier 2, Moderate** Source: Preventing Dropout in Secondary Schools (NCEE 2017-4028).

Extended Learning

The Connecticut State Department of Education supports evidenced-based models of extended learning which provide academic supports and supports intended to assist students in preparing for college, careers and future training.

Evidence-based practice and rationale	Grade band	Evidence level and source
Maximize student attendance and participation. *Student participation is affected by issues of access and convenience, as well as by the adequacy and attractiveness of the services and features provided in the program. Minimize the barriers to participation, especially for the students most in need of program services and most likely to benefit from them.*	**PreK-3** **4-5** **6-8** **9-12**	**Tier 4, Demonstrates a Rationale** Source: Structuring Out-of-School Time to Improve Academic Achievement (NCEE 2009-012)
Adapt instruction to individual and small group needs. *Supplementing learning from the school day and providing targeted assistance to students whose needs extend beyond what they can receive in the classroom instruction must be focused and targeted. Closely aligning the content and pacing of instruction with student needs will result in improved student performance. Determining the right level of difficulty, pace, and the most appropriate skills to teach is critical to effectively individualizing instruction.*	**PreK-3** **4-5** **6-8** **9-12**	**Tier 2, Moderate** Source: Structuring Out-of-School Time to Improve Academic Achievement (NCEE 2009-012)
Provide engaging learning experiences. *Activities should be interactive, hands on, learner directed, and related to the real world, while remaining grounded in academic learning goals.*	**PreK-3** **4-5** **6-8** **9-12**	**Tier 4, Demonstrates a Rationale** Source: Structuring Out-of-School Time to Improve Academic Achievement (NCEE 2009-012)

Evidence-based practice and rationale	Grade band	Evidence level and source
Use program assessment to improve quality. *Both formative and summative evaluations are instrumental in any program improvement effort. Programs should have internal mechanisms to monitor staff performance, collect data related to program implementation, and conduct independent evaluations of program implementation and student impact.*	**PreK-3** **4-5** **6-8** **9-12**	**Tier 4, Demonstrates a Rationale** Source: [Structuring Out-of-School Time to Improve Academic Achievement (NCEE 2009-012)](#)
Align out-of-school time program academics with the school day. *Maximize communication between program coordinators and school personnel, designating school staff personnel to support program staff, connecting program instruction to school instruction by identifying school goals and learning objectives, and coordinating with the school to identify staff for the program.*	**4-5** **6-8**	**Tier 4, Demonstrates a Rationale** Source: [Structuring Out-of-School Time to Improve Academic Achievement (NCEE 2009-012)](#)
Provide interventions focused on improvement of knowledge and skills required for comprehension of complex text. *This includes fundamental skills such as phonemic awareness, phonemic decoding, text reading fluency, strategies for building vocabulary, strategies for understanding and using specific textual features that distinguish genres, and self-regulated use of reading comprehension strategies.*	**PreK-3** **4-5** **6-8** **9-12**	**Tier 1, Strong** Source: [Improving Adolescent Literacy; Effective Classroom and Intervention Practices (NCEE 2008-4027)](#).

Evidence-based practice and rationale	Grade band	Evidence level and source
Provide programs for low-income, first-generation college students. *Low-income and first-generation college students in grades 11 and 12 benefit from participation in programs that provide assistance with financial aid, college application, college visits, tutoring, study skills, academic advising and career development.*	9-12	**Tier 2, Moderate** Source: *What Works Clearinghouse Intervention Report Talent Search (Rep.). (2006) Retrieved from What Works Clearinghouse.*
Provide Online Credit Recovery Systems *Online systems for credit recovery offer students the opportunity to recover credit through individualized learning that is engaging and motivating.*		**Tier 2, Moderate** Source: The Effectiveness of an Online Recovery Credit Program on Improving the Graduation Rates of Students at Risk of School Failure