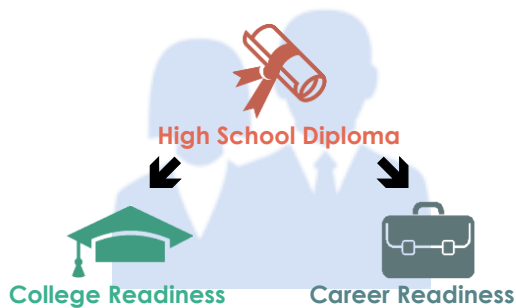


Introduction

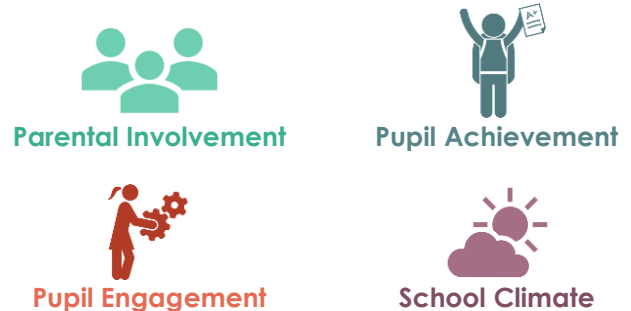
According to guidance published by the U.S. Department of Education (U.S. DoE), the **primary purpose of K-12 education is that “[e]very student should graduate from high school ready for college or a career.”**¹ This means that high school graduates should possess the knowledge, skills, and dispositions needed to succeed in postsecondary coursework (i.e., without remediation), employment, and life.² Consequently, K-12 schools and educators must align their work to help all students obtain mastery of 21st-century skills and foundational content knowledge to support their competitiveness in the postsecondary and professional spheres.³



However, despite this focus on college- and career-readiness, many students exit high school unable to meet the demands of postsecondary education and ill-prepared for the labor force.⁴ In fact, research from

ACT, Inc., and the Education Trust finds that many students are leaving high school with deficits in their college- and career-readiness.⁵ Likewise, the national dropout rate currently measures at 5.9 percent.⁶ Compared to students who graduate without being college- and career-ready, dropouts suffer from even more restricted opportunities for postsecondary education as well as greater rates of unemployment.⁷

Research shows that students may exhibit signs of potential dropout as early as Grade 1.⁸ Thus, experts recommend early interventions to support students in middle and elementary school—and early childhood—to enhance their academic and social-emotional development, empower families, and support college- and career-readiness.⁹ Notably, these early interventions can also support California districts in addressing priority areas of the state's Local Control and Accountability Plan mandate:



Source: California Department of Education¹⁰

¹ "College- and Career-Ready Students." U.S. Department of Education, January 18, 2018. p. 1. <https://www2.ed.gov/policy/elsec/leg/blueprint/college-career-ready.pdf>

² "What Is College and Career Readiness?" Achieve, March 29, 2017. https://www.achieve.org/files/Achieve_Def_No%20Crop.pdf

³ "College- and Career-Ready Standards." U.S. Department of Education, January 18, 2018. <https://www.ed.gov/k-12reforms/standards>

⁴ Leal, F. "Survey: Most High School Students Feel Unprepared for College, Careers." EdSource, July 30, 2015. <https://edsources.org/2015/survey-most-high-school-students-feel-unprepared-for-college-careers/83752>

⁵ [1] "The Condition of College and Career Readiness: 2017." ACT, 2017. pp. 2-3. https://www.act.org/content/dam/act/unsecured/documents/ccr2017/CCCR_National_2017.pdf [2] "Meandering Toward Graduation: Transcript Outcomes of High School Graduates." The Education Trust, April 2016. p. 4. [https://1k9gl1yevnfp2lpq1dhrqe17-wpengine.netdna-ssl.com/wp-](https://1k9gl1yevnfp2lpq1dhrqe17-wpengine.netdna-ssl.com/wp-content/uploads/2014/09/MeanderingTowardGraduation_EdTrust_April2016.pdf)

[content/uploads/2014/09/MeanderingTowardGraduation_EdTrust_April2016.pdf](https://1k9gl1yevnfp2lpq1dhrqe17-wpengine.netdna-ssl.com/wp-content/uploads/2014/09/MeanderingTowardGraduation_EdTrust_April2016.pdf)

⁶ "Fast Facts: Dropout Rates." National Center for Education Statistics, Institute of Education Sciences, 2017. <https://nces.ed.gov/fastfacts/display.asp?id=16>

⁷ [1] "How to Find a College That Doesn't Require the GED or High School Diploma." Community for Accredited Online Schools. <https://www.accreditedschoolsonline.org/resources/college-no-ged-or-high-school-diploma/> [2] "Table A-4. Employment Status of the Civilian Population 25 Years and Over by Educational Attainment." Bureau of Labor Statistics, March 9, 2018. <https://www.bls.gov/news.release/empsit.t04.htm>

⁸ Sapers, J. "Dropping Out: Is Your First Grader at Risk?" Ed. Magazine | Harvard Graduate School of Education, January 14, 2014. <https://www.gse.harvard.edu/news/ed/14/01/dropping-out-your-first-grader-risk>

⁹ "The 3 Main Benefits of EI." TEIS, Inc., January 18, 2018. <https://teisinc.com/the-benefits-of-early-intervention/>


¹⁰ Figure text quoted verbatim from: "State Priority Related Resources." California Department of Education, November 7, 2016. <https://www.cde.ca.gov/fg/aa/lc/statepriorityresources.asp>





College- and career-readiness is the main objective of K-12 education, yet many students still graduate without vital skills and knowledge.

This research priority brief examines strategies and policies to facilitate accurate and early identification of at-risk students in elementary and middle school and presents best practices for supporting these students on the pathway to graduation.

Key Findings

 **The decision to exit school before completion is complex and influenced by a variety of factors.** Consequently, determining if students are at-risk for academic failure or dropout requires an evaluation of many factors related to students' background and personal attributes, academic performance, and environment. Notably, factors linked to dropout have been identified as early as Grade 1.

 **Districts should develop multiple data points to identify at-risk elementary and middle school students who require additional support.** At-risk early warning indicators (EWIs) should encompass data related to attendance, behavior, and academic performance, with students being flagged for intervention after reaching certain, locally-determined thresholds.

 **Interventions should align to specific indicators of students' at-risk status.** Likewise, data should inform all decisions about interventions and supports for at-risk students to ensure accuracy and effectiveness in all implemented strategies and mitigate target risk factors.



 **Districts should create a team representing key stakeholder groups to design an early warning system (EWS) to govern at-risk student**

identification and corresponding interventions. Likewise, school level teams should monitor the interventions and individual student progress to ensure that the EWS and corresponding tiered supports are having their intended effects.

Determining Risk Factors

Research indicates that dropping out is not a standard dynamic with causal factors that predict whether a student will persist through to graduation. The final decision to exit school "is complex and relates to the individual student—and their family, school[,] and community."¹¹ Consequently, determining if students are at-risk requires an evaluation of many factors.¹² However, it is important to note that "[s]ome students with no risk factors leave school, and some with many risk factors complete school."¹³

A wide variety of risk factors can trigger the decision to drop out or disrupt students' ability to achieve college- and career-readiness.¹⁴ These impacts can be felt at any point during a student's K-12 education and even prior to enrollment in school.¹⁵ Notably, risk factors can arise from the larger community, a student's school or family, or from students' individual behaviors and attributes. Furthermore, risk factors tend to be more common among disadvantaged populations (e.g., English learners, minority students).¹⁶

 COMMUNITY	 SCHOOL
<ul style="list-style-type: none"> -Lack of support services -High crime rates -High unemployment -Lack of affordable housing -Controlled substance use 	<ul style="list-style-type: none"> -Lack of relevant curricula -Large class sizes -Low staff expectations -Segregation by ability -Unsafe environment

¹¹ Bridgeland, J.M., J.J. Dilulio, Jr., and K.B. Morison. "The Silent Epidemic: Perspectives of High School Dropouts." Civic Enterprises, Peter D. Hart Research Associates, and the Bill and Melinda Gates Foundation, March 2006, p. 3.
<https://docs.gatesfoundation.org/Documents/TheSilentEpidemic3-06Final.pdf>

¹² "The Road to Dropping Out: Minority Students and Academic Factors Correlated with Failure to Complete High School." Children's Defense Fund, June 2014. pp. 1–2.
<http://www.childrensdefense.org/library/data/education-dropping-out-facts-2004.pdf>

¹³ "The Role of Parents in Dropout Prevention: Strategies That Promote Graduation and School Achievement." National Center on Secondary Education and Transition, University of Minnesota, July 2006.
<http://www.ncset.org/publications/viewdesc.asp?id=3135>



¹⁴ "Across the Stage: Doing What It Takes to Help Every Student Graduate from High School." American Federation of Teachers and United Way of Anchorage, January 19, 2018. p. 18.

https://www.aft.org/sites/default/files/if_acrossthestagegradsuppormanualace.pdf

¹⁵ Freeman, J. "Examining the Evidence Behind High School Dropout Interventions: A Systematic Review of the Empirical Literature." Policy Analysis for California Education, January 27, 2015. <https://www.edpolicyinca.org/blog/examining-evidence-behind-high-school-dropout-interventions-systematic-review-empirical-literature>

¹⁶ [1] "Dropout Policies: Research-Based Strategies." Education and the Public Interest Center, School of Education, University of Colorado, Boulder, Colorado Council of Deans of Education, Colorado Children's Campaign, and Donnell-Kay Foundation, January 2007. p. 1.
<http://nepc.colorado.edu/files/DropOutBrochure-January2007.pdf>

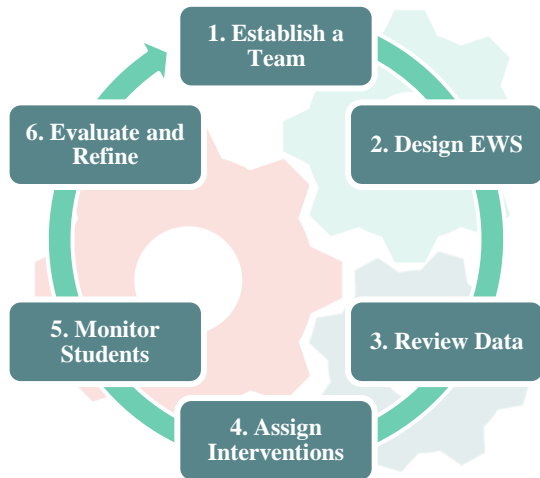
[2] "Facing the High School Dropout Dilemma." American Psychological Association, 2012. pp. 1–2, 4–5.
<http://www.apa.org/pi/families/resources/school-dropout-prevention.pdf>

 FAMILY	 INDIVIDUAL
<ul style="list-style-type: none"> -Low socioeconomic status -Low parent involvement -Non-English-speaking -Sibling who dropped out -High mobility 	<ul style="list-style-type: none"> -Low school achievement -Poor attendance -Misbehavior -Early aggression -Emotional disturbance

Source: Multiple¹⁷

Using Early Warning Systems

The American Institutes for Research (AIR) outlines a seven-step cyclical process for implementing an early warning system (EWS) with relevant early warning indicators (EWIs) of students' risk level for dropout or failure to obtain college- and career-readiness.



Source: National High School Center, AIR¹⁸

Districts should first create a team composed of representatives from key stakeholder groups—community agencies, district- and school-level staff, parents, and students—to draft goals for the EWS and determine what indicators to #1

¹⁷ Figure adapted from: [1] Geenen, S. and L. Powers. "Dropping Out of School: Problems and Solutions." Oregon Department of Education, January 19, 2018. pp. 2–3. <http://www.ode.state.or.us/gradelevel/hs/transition/fostercaredropout.pdf> [2] "Overview: Factors That May Place Students At-Risk." Massachusetts Department of Elementary and Secondary Education, July 21, 2009. <http://www.doe.mass.edu/dropout/overview.html?section=riskfactors> [3] Horton, J. "Identifying At-Risk Factors That Affect College Student Success." *International Journal of Process Education*, 7:1, June 2015. p. 84. <http://www.ijpe.online//2015/risk.pdf>
¹⁸ Figure adapted from: Therriault, S.B. et al. "Middle Grades Early Warning Intervention Monitoring System Implementation Guide." National High School Center, American Institutes for Research, February 2013. p. 3. <http://www.earlywarningsystems.org/wp-content/uploads/2013/02/EWSMGIImplementationGuide.pdf>
¹⁹ "Review of Literature on Implementing an Early Warning System." Regional Educational Laboratory Central, November 2011. pp. 3–4.

include as EWIs. In addition, individual schools in a district should construct internal teams—composed of teachers, guidance counselors, administrators, and other personnel—who will monitor their school's iteration of the EWS. This school-level team will meet regularly to examine collected data, determine which students are at-risk or on-track, and design interventions accordingly.¹⁹

Once teams are established, **they should select EWIs that consider the district's unique context and incorporate relevant data from earlier cohorts of dropouts to serve as the foundation for the EWS.** #2 Specifically, EWIs typically encompass data in three areas—attendance, behavior, and course (i.e., academic) performance (i.e., the ABC indicators)—with students being flagged for tiered interventions after reaching certain thresholds or cutoff points via the EWS.²⁰ Widely accepted cutoff points for the ABC indicators applicable across the elementary, middle, and high school spectrum include:

- A**ttendance Missing 20 days or being absent ten percent of school days
- B**ehavior Two or more mild or more serious behavior infractions
- C**ourse Performance Not reading at grade level by the end of Grade 3; failure in English or math in Grades 6-9; a grade-point average less than 2.0; two or more failures in Grade 9; failure to earn on-time promotion to Grade 10

Source: Civic Enterprises and the Everyone Graduates Center²¹

Ultimately, **individual districts and schools should determine the cutoff points for identifying at-risk students based on local contexts and available data.**²² To compose applicable cutoff points within the ABC indicators, the EWS team should examine "historical

<http://www.cde.state.co.us/dropoutprevention/relcentrallitreviewimplementinganewstocde>
²⁰ [1] "Early Warning Indicators." Michigan's Integrated Behavior and Learning Support Initiative, January 23, 2018. <https://miblsi.org/evaluation/student-assessments/early-warning-indicators> [2] Diana, M.R. "Preventing Future High School Dropouts: An Advocacy and Action Guide for NEA State and Local Affiliates." National Education Association, November 2008. p. 16. <http://www.nea.org/assets/docs/HE/dropoutguide1108.pdf>
²¹ Figure text quoted verbatim, with minor adaptations, from: Bruce, M. et al. "On Track for Success: The Use of Early Warning Indicator and Intervention Systems to Build a Grad Nation." Civic Enterprises and The Everyone Graduates Center, Johns Hopkins University, November 2011. p. 3. http://new.every1graduates.org/wp-content/uploads/2012/03/on_track_for_success.pdf
²² "Team Playbook: Using Data to Keep All Students on Track to Graduation." Center for Social Organization of Schools, Johns Hopkins University, 2012. p. 10. http://new.every1graduates.org/wp-content/uploads/2012/11/Team_Playbook.pdf

data on the number of students who dropped out in the past three to five years who would have been identified through the system.”²³ EWS thresholds for identifying on-track and at-risk students should be based on a district's or school's experience, research-based practices, and the particular level and age of the students being tracked.²⁴ As a baseline, researchers at the Center for Social Organization of Schools at Johns Hopkins University recommend the following cutoff points:

RISK LEVEL	ATTENDANCE	REFERRALS	SUSPENSIONS	GRADES
	Per Year			Math/ELA
Off-Track	36 days (< 80%)	6+	2	F
Sliding	19-35 days (80-90%)	3-5	0-1	D
On-Track	18 days (> 90%)	0-2	0-1	A, B, or C

Source: Center for Social Organization of Schools, Johns Hopkins University²⁵

With established indicators and a clear EWS framework, the school team should be prepared to review the data. It is helpful if schools designate a single authority responsible for reviewing and tracking data such as an administrator, guidance counselor, or lead teacher.²⁶ Furthermore, schools should establish a standard cycle or schedule on which to review student data.²⁷

#3

#4 In addition to analyzing the data, **EWS teams must use data and identification of at-risk students to inform precise action items.**²⁸

Because a plethora of interventions are discussed in research and practiced in elementary and middle school classrooms, it is important that EWS teams align EWIs to corresponding tiered interventions, with the flexibility to individualize interventions depending on students' needs. This will help ensure that students receive the most effective support to surmount the specific obstacles and disruptions that place them at-risk for dropout.²⁹

²³ Frazelle, S. and A. Nagel. "A Practitioner's Guide to Implementing Early Warning Systems." Regional Educational Laboratory Northwest and Institute for Education Sciences, U.S. Department of Education, January 2015. p. 8. <https://files.eric.ed.gov/fulltext/ED552306.pdf>






²⁴ Hoff, N., A. Olson, and R.L. Peterson. "Dropout Screening and Early Warning." University of Nebraska, Lincoln, March 2015. p. 9. <https://k12engagement.unl.edu/DropoutScreening&EarlyWarning3-27-15.pdf>

²⁵ Figure text quoted verbatim, with minor adaptations, from: "Team Playbook: Using Data to Keep All Students on Track to Graduation," Op. cit., p. 10.

²⁶ "Issue Brief: Early Warning Systems." Office of Planning, Evaluation, and Policy Development, U.S. Department of Education, September 2016. p. 7. <https://www2.ed.gov/rschstat/eval/high-school/early-warning-systems-brief.pdf>

#5

To maximize the impacts of interventions and maintain the fidelity of the larger EWS intervention framework, districts and schools should carefully track students' progress during delivery of the assigned intervention. Importantly, EWS teams should collect data on the frequency of interventions as well as student performance within the flagged indicator (e.g., math performance, attendance).³⁰ Specifically, to effectively monitor the impacts of interventions, educators should:

-  Review the progress of identified students to see if they continue to be flagged as at-risk
-  Identify unmet needs of students who continue to display indicators of dropout
-  Identify new or additional interventions to address students' unmet needs
-  Evaluate the outcomes of specific interventions over time to see if they have their desired effects
-  Communicate regularly with students and their families about students' at-risk status and progress

Source: National High School Center, AIR³¹

#6

Finally, once a district or school has started to implement an EWS, it should carefully monitor and evaluate the effectiveness of implementation. In particular, EWS teams should assess the effectiveness of their own practices and policies, the features of the EWS, the chosen indicators, and the relevance of attached interventions.³²

Supporting Consistent Attendance

In selecting interventions to improve at-risk students' attendance, **the EWS team should seek to determine the root causes of their absenteeism in order to address the issue at the source.** In particular, research

²⁷ Bruce et al., Op. cit., p. 22.

²⁸ Ibid., p. 32.





²⁹ Frazelle and Nagel, Op. cit., pp. 10, 12.

³⁰ Ibid., p. 13.

³¹ Figure text quoted verbatim, with minor adaptations, from: Therriault, S.B. et al. "Middle Grades Early Warning Intervention Monitoring System Implementation Guide." National High School Center, American Institutes for Research, 2/20123. p. 26. <http://www.earlywarningsystems.org/wp-content/uploads/2013/02/EWSMGIImplementationguide.pdf>


³² "Implementation Interview: Using Early Warning Systems to Identify and Support Students at Risk of Dropping Out of High School." American Institutes for Research, 2015. pp. 2-3. <http://www.ncpublicschools.org/docs/dropout/warning/ews-rubric-view.pdf>

literature highlights four domains of attendance barriers: student, school, family, and economic.





 <p>COMMUNITY/ECONOMIC</p> <ul style="list-style-type: none"> -Lack of support services -High unemployment -Food insecurity -Poverty -Lack of childcare 	 <p>SCHOOL</p> <ul style="list-style-type: none"> -Negative climate -Low family engagement -Attendance monitoring -Lack of communication -Safety issues
 <p>FAMILY</p> <ul style="list-style-type: none"> -Unstable housing -Lack of supervision -Limited resources -Different priorities -Negative view of school 	 <p>INDIVIDUAL/STUDENT</p> <ul style="list-style-type: none"> -Academic difficulties -Peer pressure -Boredom -Feeling unsafe -Few positive relationships

Source: *Multiple*³³

As a baseline strategy, **district and school staff should establish a district- or school-wide attendance strategy to cultivate a culture that values and rewards consistent attendance while addressing the needs of frequent absentees in a constructive manner.** Through such a universal strategy, school campuses and staff welcome students of all backgrounds—regardless of culture, primary language, disability status, or socioeconomic status—and highlight the importance of attending school every day.³⁴ Likewise, school staff should emphasize that “[e]very day a student is absent is a lost opportunity for learning.”³⁵ To establish such a culture, districts and individual schools can:

 <p>Make a Plan</p>	<p>Develop plans to combat absenteeism. Examine the extent of chronic absenteeism across the district and at individual campuses to develop goals, outline interventions, and build staff and resource capacity to implement the plan.</p>
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³³ Figure adapted from: [1] Chang, H.N. and M. Romero. “Present, Engaged, and Accounted For: The Critical Importance of Addressing Chronic Absence in the Early Grades.” National Center for Children in Poverty, Columbia University, September 2008. pp. 11–16. http://www.nccp.org/publications/pdf/text_837.pdf [2] Railsback, J. “Increasing Student Attendance: Strategies from Research and Practice.” Regional Educational Laboratory Northwest, June 2004. pp. 6, 8. <http://educationnorthwest.org/sites/default/files/increasing-student-attendance.pdf> [2] “Stepping Up the Pace: Improving Attendance.” M.H. West and Company, Inc., March 31, 2012. p. 3. http://www.schoolturnaroundsupport.org/sites/default/files/resources/Improving_Attendance05112012.pdf
³⁴ “California: Cultivate a School-Wide Culture of Attendance.” Attendance Works. [http://www.attendanceworks.org/resources/toolkits/leading-](http://www.attendanceworks.org/resources/toolkits/leading-attendance-in-ca-principals-toolkit/california-cultivate-a-school-wide-culture-of-attendance/)

 <p>Engage Students and Families</p>	<p>Contact families to find out what prevents a student from coming to school, and educate students and families about how absences result in lost learning time. In addition, offer training for staff on engaging and partnering with families.</p>
 <p>Address Barriers</p>	<p>Analyze data and gather insight from students, families, and community partners about attendance barriers. Then, modify policies, practices, and programs accordingly to address common barriers and challenges across student groups.</p>
 <p>Provide Personalized Outreach</p>	<p>Reach out to individual students and their families as soon as any pattern of absenteeism emerges. This clarifies the specific barrier each student faces and informs interventions accordingly.</p>
 <p>Incentivize Attendance</p>	<p>Provide recognition and incentives to students and families who have good and improved attendance. Do not focus exclusively on perfect attendance; rather, broaden the focus of rewards to encourage improvement.</p>

Source: *Connecticut State Department of Education and Attendance Works*³⁶

For those students who maintain high levels of absenteeism despite universal support, more targeted interventions should be implemented. Notably, tiered interventions can be drawn from standardized practices, though more intense cases of chronic absenteeism require interventions with personalization to individual student needs.³⁷

Supporting Positive Behavior

Effective behavioral and social-emotional interventions involve the promotion of positive behaviors and the reduction of problematic behaviors via the proliferation of protective factors and minimization of risk factors. Consequently, a successful EWS and accompanying tiered intervention

[attendance-in-ca-principals-toolkit/california-cultivate-a-school-wide-culture-of-attendance/](http://www.attendanceworks.org/resources/toolkits/leading-attendance-in-ca-principals-toolkit/california-cultivate-a-school-wide-culture-of-attendance/)
³⁵ “Chronic Absence: Strategies for School Sites.” Attendance Works. <http://www.attendanceworks.org/chronic-absence/addressing-chronic-absence/strategies-for-school-sites/>
³⁶ Figure adapted from: [1] “What Can Schools Do to Improve Attendance?” Connecticut State Department of Education, February 5, 2018. <http://www.sde.ct.gov/sde/cwp/view.asp?a=2663&q=336674> [2] “Chronic Absence: Strategies for School Sites.” Attendance Works, February 5, 2018. <http://www.attendanceworks.org/chronic-absence/addressing-chronic-absence/strategies-for-school-sites/>
³⁷ “Chronic Absence: 3 Tiers of Intervention.” Attendance Works. <http://www.attendanceworks.org/chronic-absence/addressing-chronic-absence/3-tiers-of-intervention/>

framework create conditions and develop competencies that promote positive development and resiliency in elementary and middle school students.³⁸ Specifically, districts and schools should implement strategies that teach skills and help students develop desired behaviors. Districts and schools should also promote a school climate that supports positive behavior and discourages negative behaviors through positive reinforcement and consistent and immediate responses.³⁹ This can be accomplished through a system-wide commitment to:

- 

Caring and Support
By providing nurturing staff, positive role models, peer support, cooperation, and a warm, responsive school climate
- 

High Expectations
Through mastery of basic skills, emphasis on higher order academics and avoidance of tracking
- 


Meaningful Participation
Via student leadership, decision-making, and participation in extracurricular activities as well as culturally diverse curricula and experiences


Source: Florida Department of Education⁴⁰


Furthermore, tiered behavioral supports should focus on helping students develop social-emotional and behavior management skills in a genuine and meaningful context. As such, elementary and middle school students from all backgrounds should be able to practice vital social-emotional and behavioral competencies and skills such as communication, conflict prevention, and self-awareness.⁴¹


For those at-risk students who require greater attention and support, **school staff should consider behavior monitoring to “guide students in setting behavioral goals, [understanding] their own behavior and its effect on others, and [recognizing and practicing] the behaviors necessary for success in school.”**⁴² This process might include a teacher, student, and their


parents drafting a behavior contract that defines the minimum expectations students are expected to meet. Likewise, students may be given checklists to self-monitor behavior and determine for themselves if they meet expectations.⁴³ Teachers may also complete daily report cards evaluating student's behavior in specific areas related to individual goals.⁴⁴ To maximize the effectiveness of behavior monitoring interventions, teachers and students can:

- 

Define Behavior Targets
By selecting one or more behaviors that will be monitored, including behaviors to increase and decrease
- 

Choose a Method for Recording Data
Such as rating scales, checklists, or frequency counts collect data on behavioral progress and record data for other interested parties
- 

Choose a Monitoring Schedule
So that the student and teachers know exactly when monitoring will occur and who will be responsible for data collection
- 

Choose Rewards
To help motivate students to work toward their target behavioral goals and to incentivize improvement
- 

Phase Out Monitoring
To refine its scope as students attain certain behavioral goals so that they can focus their efforts on those yet to be achieved

Source: Intervention Central⁴⁵

Supporting Academic Achievement

Guidance from the RTI Action Network emphasizes the need to match struggling learners with appropriate tiered interventions that meet their particular needs in specific content areas (e.g., math, reading) or skills (e.g., numeracy, writing) that they are having difficulty with. To this end, the organization highlights four essential components of any combined EWS and accompanying interventions framework:⁴⁶

³⁸ “Identification of Risk and Protective Factors.” Florida Department of Education. p. 2.
<http://www.fl DOE.org/core/fileparse.php/7771/urlt/0084829-sec2.pdf>

³⁹ “PBIS and the Responsive Classroom Approach.” Northeast Foundation for Children, Inc., 2009. p. 4.
https://www.responsiveclassroom.org/sites/default/files/pdf_files/PBIS_whitepaper.pdf

⁴⁰ Figure text adapted from: “Identification of Risk and Protective Factors,” Op. cit., p. 3.

⁴¹ “Positive Behavioral Interventions and Supports: A Multi-Tiered Framework That Works for Every Student.” National Education Association, 2014. pp. 4–5.
https://www.nea.org/assets/docs/PB41A-Positive_Behavioral_Interventions-Final.pdf

⁴² Moss, E., A. O’Connor, and R.L. Peterson. “Strategy Brief: Behavior Monitoring.” University of Nebraska, Lincoln, December 2013. p. 1.
<https://k12engagement.unl.edu/strategy-briefs/Behavior%20Monitoring%201-20-14%20chng4.pdf>

⁴³ Connell, G. “Behavior Contracts and Checklists That Work.” Scholastic, October 13, 2015.
<http://www.scholastic.com/teachers/blog-posts/genia-connell-behavior-contracts-and-checklists-work/>

⁴⁴ Moss, O’Connor, and Peterson, Op. cit., p. 3.

⁴⁵ Figure adapted from: “How To: Teach Students to Change Behaviors through Self-Monitoring.” Intervention Central.

<http://www.interventioncentral.org/node/961544>

⁴⁶ Bulleted text quoted verbatim, with minor adaptations, from:

“What Is RTI?” RTI Action Network.

<http://www.rtinetwork.org/learn/what/whatisrti>

- **High-Quality, Scientifically-Based Instruction:** All students receive high-quality, research-based instruction in the general education classroom.
- **Ongoing Student Assessment:** Universal screening and progress monitoring are used when determining which students need interventions. Student progress is assessed to determine the effectiveness of interventions.
- **Tiered Instruction:** A multi-tiered approach is used to differentiate instruction for all students. The model incorporates increasing intensities of research-based interventions matched to student needs.
- **Parent Involvement:** Schools implementing an EWS and intervention framework provide parents information about their child's progress, the interventions used, the staff who are delivering the interventions, and the academic goals for their child.

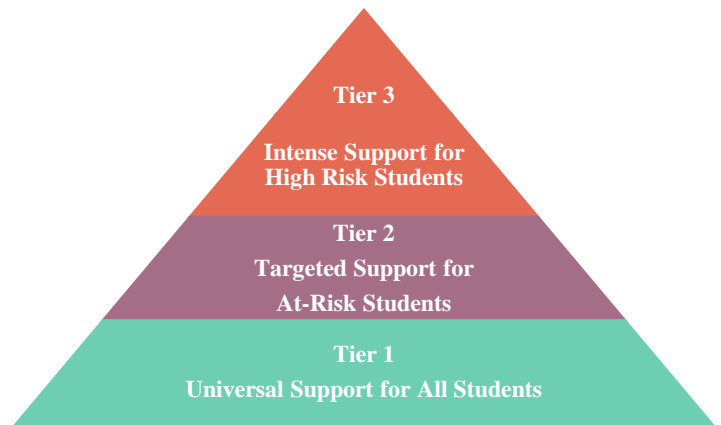
Should the general education curriculum be insufficient to promote a student's academic achievement, teachers and other instructional staff should engage in small group or one-to-one interventions to target identified learning deficits.⁴⁷ To align specific interventions to student needs, the EWS team should "ensure that the academic intervention is of high quality, is sufficiently strong to address the identified student problem, is fully understood and supported by [teachers], and can be implemented with integrity."⁴⁸ Specifically, the EWS team should determine a student's primary areas of need, develop goals related to those needs, and select an appropriate tiered intervention after weighing its potential impact against others and following collaborative consultation.⁴⁹

⁴⁷ "Tier Interventions." Southwest West Central Service Cooperative. <https://www.swsc.org/page/711>

⁴⁸ Wright, J. "Academic Interventions 'Critical Components' Checklist." Intervention Central, 2010. p. 1. https://www.swsc.org/cms/lib/MN01000693/Centricity/Domain/91/RTI_academic_intv_critical_components.pdf

⁴⁹ Bulleted text quoted verbatim, with minor adaptations, from: "How to Select an Evidence-Based Intervention: A Guide." Neag School of Education, University of Connecticut. p. 3. https://implementationscience.uconn.edu/wp-content/uploads/sites/1115/2014/12/PRIME_quickguide_edvidence-based_intervention.pdf

⁵⁰ Figure adapted from: Shapiro, E.S. "Tiered Instruction in a Response-to-Intervention Model." RTI Action Network. <http://www.rtinetwork.org/essential/tieredinstruction/tiered-instruction-and-intervention-rti-model>



Source: RTI Action Network⁵⁰

Notably, reading and math achievement are prominent indicators of the likelihood of high school graduation. Consequently, **elementary and middle school educators should establish a comprehensive intervention framework to support student literacy and numeracy skills and related content knowledge.**⁵¹

Experts recommend that tiered literacy interventions emphasize the main components of reading: phonemic awareness, phonics, fluency, vocabulary, and comprehension. Notably, reading interventions should feature "[s]ystematic, explicit, [and] direct instruction of skills and strategies" as well as "[d]ifferentiation to meet the diverse needs of students."⁵² Comparatively, math interventions should focus on relevant grade-level topics (e.g., whole numbers and operations in elementary school, rational numbers and arithmetic in middle school).⁵³ Likewise, tiered math interventions should emphasize:⁵⁴

- Instructional explicitness;
- Instructional design to ease learning challenges;
- A strong conceptual basis for taught procedures;
- An emphasis on drill and practice;
- Cumulative review as part of drill and practice; and
- Motivators to help students regulate behavior.

⁵¹ [1] "Facing the High School Dropout Dilemma," Op. cit., p. 3. [2] Hernandez, Op. cit., pp. 6, 18. [3] "Why Is Numeracy Important?," Op. cit. [4] "The Importance of Early Numeracy," Op. cit. [5] Hauser and Koenig, Op. cit., p. 64.

⁵² "Reading Interventions." Southwest West Central Service Cooperative. <https://www.swsc.org/page/720>

⁵³ "Math Interventions." Southwest West Central Service Cooperative. <https://www.swsc.org/page/722>

⁵⁴ Bulleted text quoted verbatim, with minor adaptations, from: Fuchs, L.S. "Mathematics Intervention at the Secondary Prevention Level of a Multi-Tier Prevention System: Six Key Principles." RTI Action Network. <http://www.rtinetwork.org/essential/tieredinstruction/tier2/mathintention>

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