

Early Warning Systems- Foundational Research and Lessons from the Field

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October 2011

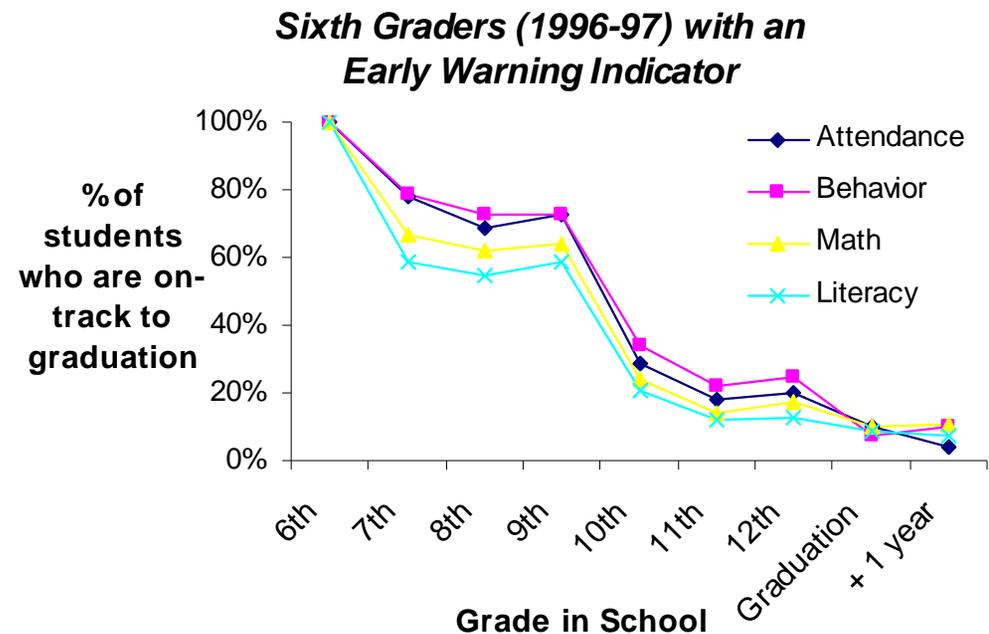
Core Idea of Early Warning Systems (EWS)

- To graduate college and career ready students need to successfully navigate several key transitions and acquire a set of academic behaviors-in short they need to learn how to succeed at school
- Students signal that they are on or off track towards these outcomes through their attendance, behavior, and course performance-the ABC's

Substantial Numbers of Future Dropouts can be identified in as early as 6th grade

The Primary Off-Track Indicators for Potential Dropouts:

- **A**ttendance - <85-90% school attendance
- **B**ehavior - “unsatisfactory” behavior mark in at least one class
- **C**ourse Performance – A final grade of “F” in Math and/or English or Credit-Bearing HS Course

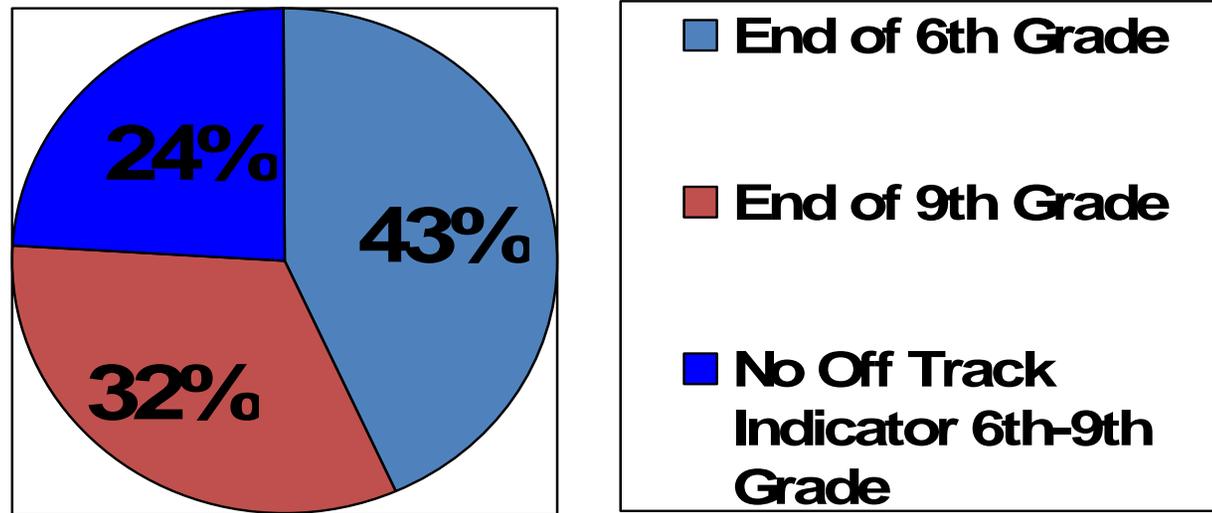


Sixth-grade students with one or more of the indicators may have only a **15% to 25% chance of graduating** from high school on time or within one year of expected graduation

*Note: Early Warning Indicator graph from Philadelphia research which has been replicated in 10 cities.
Robert Balfanz and Liza Herzog, Johns Hopkins University; Philadelphia Education Fund*

In High Poverty School Districts, 75% or More of Eventual Dropouts Can be Identified between the 6th and 9th Grade

Percent of Dropouts That Can Be Identified between the 6th and 9th grade-Boston Class of 2003



Core Idea of EWS cont.

- By tracking the ABC's it is possible to identify when students are beginning to fall off track, providing time to intervene and alter their trajectory through school and beyond
- Using ABC Early Indicator data it is possible to design more targeted and effective interventions at the individual, classroom, school, and even district and state levels.

Emerging Thresholds for Off-Track Indicators

- **Attendance**-missing 20 or more days of school
- **Behavior**-Two or more behavior infractions in a year (e.g. suspensions) or sustained mild misbehavior.
- **Course Performance**-Failing a math or English class in the middle grades, failing two or more credit bearing courses in high school
- **Specific cut points can and will vary** around these normative thresholds depending on trade offs between efficiency (i.e. minimizing false positives) and yield (capturing large percent of students on path to dropping out), as well as, rather triggers are being set for monitoring and problem solving vs. substantial intervention

Early Warning Indicator Data Tool

- Without additional support to provide interventions at the scale and intensity required to meet each student's individual needs, teachers can easily feel overwhelmed.
- Research has shown that when teachers feel overwhelmed by the level of challenge in high needs schools, they will often lower expectations for students.

	Attendance				Behavior Comments		Math Grades		Literacy Grades		Assessments		
Student	07-08: Days Absent	08-09: Days Absent	07-08: Att.%	08-09: Att.%	Dec	Mar	Dec	Mar	Dec	Mar	Reading Grade Level	Math PSSA 2008	Literacy PSSA 2008
A	9	19	95%	84%	5	6	C	D	D	C	8	Proficient	Basic
B	12	13	93%	89%	7	8	D	C	F	D	6.5	Below Basic	Basic
C	48	69	73%	43%	10	10	F	F	F	D	5.5	Below Basic	Below Basic

Key Definitions

Off-Track Indicators

- Are research based and identified by following cohorts of students over time
- Students with off-track indicators, absent effective intervention, have low odds of achieving a desired outcome (e.g. high school graduation)
- At a minimum, off-track indicators should indicate that the probability of student achieving a desired outcome is less than 50%. The higher the odds, the more efficient the indicator
- Strong indicators also identify a substantial portion of students who do not achieve a desired outcome.

On-Track Indicators

- Have similar properties to off-track indicators but indicate that students who possess them have high odds of achieving a desired outcome (e.g. post-secondary success)

Early Warning Flags

- Indicate that a student is moving towards off track status or away from on-track status
- Can be research based, but sometimes grounded in common sense i.e. if attendance, behavior, or course performance dips it is important to know why and to address it quickly

Early Warning Indicator and Intervention Systems (EWS)

- Combine ready access, at the classroom level, to on and off-track indicators (the ABC's), with regular time to analyze the data and an organized response system that can act upon early warning data in both a systematic and tailored manner.
- The most effective school level intervention systems combined whole school/classroom prevention, targeted problem solving and moderate intensity supports when prevention does not work, and case managed high intensity supports for the neediest students.
- Investments in mission building, professional development, coaching and networking are critical to success

Lessons from the Field

Based on On Track to Success-The Use of
Early Warning Indicator and Intervention
Systems to Build a Grad Nation by Civic
Enterprises and Everyone Graduates Center-
Due out in two Weeks

EWS Lessons from the Field 1- Organizing

- Put Students First-rapid identification is important but so is building on student strengths
- Be selective in use of indicators-center efforts around a few high yield indicators
- Design systems that respond to student behavior well before triggers for the more intensive interventions are reached

EWS Lessons from Field cont.

- Recognize there will be state-by-state and district-by-district variability in data availability, data system capacity, and support for interventions
- Build up from pilot and listen to end users before going too far
- Integrate EWS into instructional improvement efforts and other student support services
- Build and obtain the required capacity to launch and sustain EWS by engaging stakeholders beyond the school systems (non-profits, corporations, community organizations etc.)

EWS Lessons From Field 2-Data

- Record from simplest and most direct source available
- Make sure data is entered by appropriately trained staff and according to well-designed protocols
- Determine policies for sharing information with and collecting data from sources beyond the schoolhouse based on the goal of enhancing knowledge of students and increasing the effectiveness of interventions

EWS Lessons from Field Cont.

- Teach people how to understand and use data
- Provide follow-up coaching for data use
- Create networking opportunities so EWS users can learn from each other
- As EWS expands to include both school readiness and post-secondary success, do not create three separate systems with three separate sets of indicators
- Also integrate benchmarks tests aligned with common core and next generation assessments with the EWS- (typically only time for one data meeting in schools)

EWS Lessons from Field 3- Implementing at the School-Level

- Compose a “support list” of students and revise it every few weeks based on the indicators
- Act on the data shown in the “support list”
- Make decisions about actions and interventions as a team
- Use knowledge of your school and students when choosing interventions (one size does not fit all)

EWS Lessons from Field cont.

- Look for and act upon patterns that emerge from the data-at individual, classroom, school, and district level
- Practice intervention discipline
- Track outcome of interventions frequently
- Cast a wide support net, involve students, parents, non-profits and community organizations in keeping students on track
- In schools with large numbers of off-track students, often need to organize a “second shift” of adults from non-profits and the community to insure all off-track students can be supported

Key ABC Interventions

Focus on the ABC's-Attendance

- Understand that chronic absenteeism (missing a month or more of school) is much more widespread, particularly in high poverty communities, then is commonly recognized and that like bacteria in hospitals creates havoc
- Organize comprehensive efforts built around knowledge that from the middle grades on student absenteeism driven by combination of student choice, school factors driving students away, and out of school factors pulling them away
- Create programming that compels students to come to school-e.g. most engaged middle grades students often found in cognitively rich activities which combine teamwork with performance (Robotics, debate, drama, chess etc.)
- Build an attendance problem solving capacity into schools and districts extend it via a network of relationships with wrap around service providers

Focus on ABC's-Behavior and Effort

- Model and teach resiliency and self-management/organization skills
- Model and teach staying out of trouble skills
- Build Success Scripts in student's heads (effort leads to success), work to undermine Failure Scripts (success is capricious, withholding effort keeps you psychologically safe)

Focus on ABC's- Course Performance

- Provide course coaching-assistance, support, and on occasion even advocacy which enables students to succeed in their courses-including monitoring assignment completion, and preparation for tests and quizzes, and help with catching up when absent.
- Make sure tutoring efforts are linked tightly with needs and expectations of student's courses- (don't work on fractions, if Friday's test is on probability)
- For high school students, provide opportunity for rapid credit recovery

Keeping Students On-Track

Pre-K to Post-Secondary-

Consider Both Academic and Social Needs

- **Pre-K and Elementary Grades**-Core academic competencies and socialized into the norms of schooling in a joyful manner
- **Middle Grades**-Intermediate Academic Skills (reading comprehension and fluency, transition from arithmetic to mathematics) and a need for adventure and camaraderie
- **High School**-Transition to Adult Behaviors and Mind Set and a path to college and career readiness, as well as the right extra help for students with below grade level skills

Need to Build and Provide Transitional Support from High School to College and Career

- All students need a clear pathway from college to post-secondary schooling and training
- Many students will need additional supports- both academic and social to successfully make the transition
- Currently no one owns the space between students meeting HS graduation requirements and starting college and career training. Do not really have a way to fund this-falls between cracks of public school system and state university system

Post-Secondary Success Indicators- Early Findings

- Not having any off-track indicators for high school graduation leads to increased odds of post-secondary attainment
- But to have high odds of post-secondary attainment need to have a very strong 9th grade year-strong attendance, no behavior problems, B or better average-and be on-age
- Low ABC's predict high school dropout, high ABC's predict post-secondary success
- Means we can have unified high school graduation to post-secondary success indicator system

Help Broker Policy Reviews to Support Graduation For All

- Schools and communities need to measure and act on chronic absenteeism-the number of students who miss a month or more of school (also measure those who miss a week or less).
- Schools and communities need positive behavior support programs and alternatives to suspensions and may need to re-examine their disciplinary policies
- Schools and communities need effective second chance and credit recovery programs which hold students accountable but provide a reason for them to keep trying

Know and Understand the Graduation Challenge in Your State- Four Studies that Matter

- **Segmentation Study**- How many students dropout each year, how far are they from graduation, how old are they?
- **Cohort/Early Warning Indicator (EWI) Study** –How early and with what indicators can potential dropouts be identified?
- **Distribution of Students with EWI**-In which middle and high schools are students with early warning indicators concentrated, which schools do most dropouts attend?
- **Success in Post-Secondary**-What percent of students from each high school graduate from college?

Keeping States on Track-Civic Marshall Plan to Build a Grad Nation

- Coalition of Leading Non-Profits, Governmental and School Organizations
- Goal-90% Graduation Rate for class of 2020 (currently in 4th grade)
- Focused Approach
 - Target **1,746 dropout factories** & feeder elementary & middle schools -- about **50 percent of the dropouts** in these schools
 - Another **35 percent in the additional 3,000 low graduation rate** high schools with rates between 61 and 75 percent.

Keeping States On Track- CMP Benchmarks

- To earn 600,000 more diplomas for the Class of 2020, we set clear goals along the way:
 - By **2012-13**, substantially increase number of students **reading on grade level** by 4th grade; **chronic absenteeism** significantly reduced; **needs assessment** conducted for all dropout factory communities
 - By **2014-15**, every low graduation state & school district has **early warning & intervention system**; a **non-profit success mentor** for every 15-20 off-track students
 - By **2016**, all dropout factories in process of being **transformed** or **replaced**; **compulsory school age** increased to 18 in all states; clear pathways to **college and career for all (including dropouts)**

The Good News is

- We know why students dropout, which schools they dropout from and what the warning signs are
- Effective interventions and examples of substantial improvement exist, even in cities once viewed as unreformable and states viewed as too poor.
- We are left with a giant engineering challenge of getting the right supports, to the right students, at the right time, at the scale and intensity required.
- America is good at engineering challenges

For more information

- Visit the Everyone Graduates Center website at www.everyone1graduates.org
- E-mail Robert Balfanz at rbalfanz@csos.jhu.edu and Joanna Fox at jhfox@jhu.edu