

On-Track to College & Career Success

Research on Early Warning Indicators for High School Students

The On-Track to College & Career Success dashboard is a tool to help parents, teachers and schools identify students who are off track to postsecondary success and help these students get back on the path to success. Traditionally graduating from high school has been the primary goal of students, and graduating high school was sufficient for future success. However, simply graduating from high school is no longer enough in our current economy. Students need the skills that will help them have success in college and be competitive in the job market. The On-Track to College & Career Success dashboard shows students whether they are meeting targets that will help them to be successful after graduating from high school.

Today, college readiness also means career readiness. While not every high school graduate plans to attend college, the majority of the fastest-growing jobs that require a high school diploma, pay a salary above the poverty line for a family of four, and provide opportunities for career advancement require knowledge and skills comparable to those expected of the first-year college student.

Source: ACT <http://www.act.org/research/policymakers/pdf/ForgottenMiddleSummary.pdf>

The first step in being prepared for college and career is to graduate from high school. In Washington State, the Higher Education Coordinating Board states that the minimum skills expected of a first-year college student include a GPA of 2.0, 4 credits of Language Arts, 3 credits of Math, including a math based quantitative course taken during senior year, 2 credits of science, 3 credits of social studies, 2 credits of a world language and 1 credit of arts.

Source: <http://www.hecb.wa.gov/sites/default/files/MCASOverview-StudentsParents-Rev.12-11>

Unfortunately, state standards have not kept pace with the market needs. Highline's Board, in 2007, raised the graduation requirements to include 4 credits of Language Arts, 3 credits of Math, 3 credits of social studies, 2 credits of science, 1 credit of CTE, 1 credit of health and fitness, 1 credit of art and 7 elective credits. This is a total of 23 credits.

Even though graduating from high school is the minimum requirement to go to college or have a successful career, many students do not graduate from high school because they have not acquired enough credits, have not passed state tests or do not come to school very often. Often by the time schools realize which students are most in danger of not graduating it is too late for a student to catch-up and he or she leaves school without graduating.

Fortunately as a result of research that has been done on the factors that are most likely to contribute to a student not graduating from high school we can identify by as early as middle school the students who are most likely not to graduate. This research indicates that 9th grade attendance, 9th grade course failures (Fs), grade point average and credit accumulation are the most important predictors of whether a student will graduate from high school and have post-secondary success.

The most comprehensive study of students who are on-track and off-track to graduate was done with a cohort of students in Chicago. This study determined that:

- A student is considered on-track if he or she has accumulated five full credits (ten semester credits) and has no more than one semester F in a core subject (English, math, science, or social science) by the end of the first year in high school.

- Among students entering 9th grade in 1999, the four-year graduation rate for on-track freshmen was 81 percent, compared with only 22 percent for those who fell off track as 9th graders. Another way to look at it: The on track indicator was 85 percent successful in predicting which members of the freshmen class would not graduate.

This study also found that GPA, credits, course failures and attendance are a good predictor of whether a student will graduate. The research is summarized in the bullets below:

- **GPA-** Students who ended 9th grade with a 2.5 GPA or higher had an 86% graduation rate; students with a GPA below 1.5 had a 53% grad rate; students with a GPA below 1.0 had a 28% grad rate.
- **Credits-** A student is considered on-track if he has accumulated five full credits by the end of 9th grade. Students who accumulated less than five credits by the end of 9th grade were 44% less likely to graduate in five years than students who accumulated 5.0 to 5.5 credits by the end of 9th grade.
- **Course Failures-** Ninth grade students with 2 course failures were 35% less likely to graduate in 4 years than 9th graders with 0 course failures.
- **Attendance-** A 9th grade student with 95% first semester attendance has a four year graduation rate of 87%. A 9th grade student with 85% attendance has a four year graduation rate of 41%

Source: *What Matters for Staying on Track and Graduating in Chicago Public High Schools*; Allensworth and Easton, 2007. http://csr.uchicago.edu/content/publications.php?pub_id=116

There are other on-track studies besides the Chicago report. A Gates Foundation study of seven urban school districts found that the leading indicators of being off-track to graduate are:

- Age 15 or older when entering 9th grade
- Absent more than 10 days of fall semester of 9th grade
- Failed two or more courses fall semester of 9th grade
- Had fewer than five credits or failed two or more courses in the spring semester of 9th grade

Source: *This School Works for Me*, Bill & Melinda Gates Foundation, 2010.

<http://www.gatesfoundation.org/united-states/Pages/school-works-for-me.aspx>

Another study of 14,000 students in Philadelphia found that there are four indicators that were predictive in determining whether or not a student graduated from high school. These are:

- A final grade of F in Math
- A final grade of F in English
- Attendance below 80%
- A final “unsatisfactory” behavior mark in at least one class

Students who have any one of these markers have a 10%-20% chance of graduation within 5 years

Source: *Keeping Middle Grades Students on-track to graduation: Initial Analysis and Implications*; Balfanz and Herzog, 2005.

http://web.jhu.edu/CSOS/images/Balfanz_Keeping_Middle_Grade_Students_on_the_Path_to_High_School_Graduation.pdf

States have looked at this on-track research and have begun creating Early Warning data systems to try and identify students who are most in danger of not graduating from high school. According to Education Week, at least 16 states have created early warning systems and 18 others have plans to implement an early warning system.

Source: *Education Week*, "Swift Growth Found for 'Early Warning' Data Systems", November 9, 2011
http://www.edweek.org/ew/articles/2011/11/09/11earlywarning_ep-2.h31.html

Even when a student graduates from high school it does not always mean that he or she has the required skills to be successful in college or in a career. Nationwide over one-third of college students are required to take a remedial course before they can begin college-level work (National Center for Education Statistics- https://www.epiconline.org/college_ready_resources). In Washington, 53% of the class of 2007 students who started college during the 2007-2008 school year took remedial classes (http://www.sbctc.ctc.edu/college/_e-assesscollegereadiness.aspx).

Other studies have shown that many employers are not satisfied with the job-readiness of high school graduates. A 2006 survey of human resources offices in New York City found that 72% of recent hires were deficient in basic English writing skills such as grammar and spelling (Education Week- <http://www.edweek.org/ew/articles/2007/06/12/40overview.h26.html?print=1>). In a 2005 survey conducted for the National Association of Manufacturers 84% of respondents said schools were not doing a good job of preparing students for the workforce, with more than 50% stating that students were deficient in math and science (Education Week- <http://www.edweek.org/ew/articles/2007/06/12/40overview.h26.html?print=1>).

Besides these more academic skills students also need to demonstrate the behaviors of successful adults, such as persistence, punctuality, and follow-through. The human resources office survey found that 70% of human resource officials found deficiencies in graduates in skills such as work-ethic and professionalism (<http://www.edweek.org/ew/articles/2007/06/12/40overview.h26.html?print=1>). University of Oregon professor David Conley found that "behavioral attributes" such as "study skills, time management, awareness of their own performance, persistence and the ability to use study groups" are just as important as content knowledge for being successful in college (<http://www.edweek.org/ew/articles/2007/06/12/40overview.h26.html?print=1>).

The on-track dashboard can provide an early warning to help us identify students who are in danger of not graduating and also help to ensure that all students are on the path to postsecondary college and career success.