

Core Function: High School Leadership and Decision Making

Effective Practice

Make decisions to assist students based on data

Overview: Longitudinal data systems allow educators to capture key data that can help them make decisions on how to best support students and increase the likelihood that they will graduate and be prepared for college and/or career. Effective longitudinal tracking systems allow educators to monitor student progress and intervene with students who are not on track for graduation, as well as provide a gauge of the effectiveness of their instructional or intervention programs during high school and beyond. Early warning systems that include attendance, behavior, and course performance (at a minimum) and provide frequent, real-time data can serve to identify students at risk for dropping out so that appropriate interventions can be implemented. Leadership teams using these systems must meet frequently and communicate results to teachers so that instructional approaches can be adjusted if necessary; a second group of adults comprised of community partners can provide further supports for students at risk for dropping out.

Evaluate Your Practice: How can leadership teams effectively monitor student data using longitudinal data systems in order to make decisions that support student success? How can early warning systems prevent students from dropping out? How can leadership teams effectively use early warning systems to prevent students from dropping out?

Introduction

Longitudinal data systems allow schools to capture key information on their success in preparing students for college and career, as well as provide early warning data on students at risk of dropping out so that appropriate assistance can be initiated. This often resembles a tracking system or process that collects and analyzes data points such as transfer, dropout, graduation rates, attendance, tardiness, and post high school movements of graduates. This brief describes methods of tracking student longitudinal data and discusses how early warning data systems can be used to intervene with students who may be at risk for dropping out.

How can leadership teams effectively monitor student data using longitudinal data systems in order to make decisions that support student success?

The existing literature on secondary school phenomena is rich with information about why students transfer, drop out, or pursue postsecondary education. However, there is less information available about how schools can effectively track these student status changes and what impact this tracking could have. Therefore, examples of organizations or school systems that have found ways to monitor these student indicators and outcomes provide information on potential options for schools to emulate.

Consortium on Chicago School Research—On Track Indicator. The Chicago Public Schools, in partnership with the Consortium on Chicago Schools Research, use a data tool called the On Track Indicator, which helps schools determine which students are completing the milestones needed to be on track for graduation in their ninth grade year. By tracking the course performance and credit accumulation of students in a purposeful way, schools are able to provide interventions in a timely manner to try to reduce future dropout rates and improve student outcomes (Allensworth & Easton, 2005). Research has shown this tool to be effective in both increasing the percentage of on-track students in 9th grade and improving both graduation rates and academic outcomes for these students (Roderick, Kelley-Kemple, Johnson, & Beechum, 2014).

New Visions for Public Schools—School Snapshot and Ninth Grade Tracker. New Visions for Public Schools created a tool called School Snapshot, which aggregates data for schools so that teams can determine which students are on

track for graduation and college readiness. The indicators they highlight include attendance, grade point average, a metric for college readiness, course accumulation, and passage rates on state exams. With this aggregated data, schools are able to diagnose which students are on or off track to graduate, as well as which students are on track for college. Knowing how critical the ninth grade year is to high school outcomes, New Visions has a separate Ninth Grade Tracker that is shared with parents and used to determine as soon as possible when a student needs additional supports (Fairchild et al., 2011; Carrano, 2013).

Naviance – Alumni Tracker. Naviance is a software system for high schools that tracks the high school experience, college application process, and academic outcomes for students. This system allows access for students, parents, and school staff, and it keeps track of everything from course history, assessments, and grades to college application activities (Bloom & Kisanne, 2011). A partnership with the National Student Clearinghouse now allows schools using Naviance to also track postsecondary outcomes for alumni. Through this comprehensive system, schools are able to find out how their graduates fared in college, including how far they have progressed and what degrees they earned (Spackey 2013). Some school districts have reported case study data that show increases in graduation rates for minority populations, as well as increases in the percentages of students applying to college since implementing the Naviance program (Burns, 2016; Herbert, 2012; Hobsons, Inc., 2016).

Schools can use the systems described above or their own systems to closely monitor their students' inputs and outcomes to better understand the population they serve, as well as the effectiveness of the programs they are providing. These data should be shared among key stakeholders both in and outside of the school to determine which interventions are working as intended to help students be prepared for college and career experiences. It is important to note that leadership team members or others working with student data to monitor progress will likely need professional development on ways to work with this data effectively in order to impact student performance and school improvement (Data Quality Campaign, 2009).

How can early warning systems prevent students from dropping out?

Dropping out of high school has significant consequences to individuals, communities, and the nation. Individuals who drop out of high school have more difficulty finding jobs than those with higher levels of education (Amos, 2009), costing them millions of dollars in lost income over their lifetimes. Young adults, ages 16-24, who are high school dropouts have a particularly hard time, generating lower earnings and higher incarceration rates than their graduate peers (Sum, Khatiwada, McLaughlin, & Palma, 2009). Dropouts also tend not to participate in the civic lives of their communities, with much lower rates of volunteering, voting, and other indicators of civic health (Bruce, Bridgeland, Fox, & Balfanz, 2011). The U.S. economy loses billions of dollars in revenue from a lack of productive workers and increased social services.

A student's decision to drop out of high school does not arise suddenly, but rather slowly, through a process of disengagement, over a period of years. Warning signs of dropping out are apparent well before students actually leave school, signaling trouble for some as early as the elementary or initial middle grades. Research has converged around three categories of academic data that have been shown to be the most powerful predictors of whether or not a student will drop out in the future. These data points have become known as the "ABC's" – attendance or absenteeism, behavior problems, and course performance or failure (Mac Iver & Mac Iver, 2009; Bruce et al., 2011). The ABC's present an opportunity for schools to monitor student progress early and intervene to help students get on track to graduation. Research shows that most students at risk of falling off track could graduate if they were provided with the appropriate supports early enough and those supports were sustained (Bruce et al., 2011).

Early Warning Indicator and Intervention Systems (EWS) are part of the data-driven, outcomes-focused, high-impact education movement (Bruce et al., 2011). The purpose of these systems is to enable all students both to stay on track to graduate and to prepare for college and career. Using these systems increases educators' ability to identify, through analyzing data, those students who are falling behind far enough in advance to provide appropriate interventions. These systems "grew out of a simple premise that disengagement from school is a

gradual process and that students show identifiable indicators that they are on the path to dropping out” (Bruce et al., 2011, p. 2.). Research over the past 15 years has shown that EWS that measure attendance, behavior, and course performance indicators are better predictors of student outcomes than demographics or test scores (Neild, Balfanz, & Herzog, 2007; Pinkus, 2008).

To supplement traditional EWS, Porter, Balu, Gunton, Pestronk, and Cohen (2016) recommend using data systems that allow for frequent, real-time, student data updates. They assert that because high school students often can move from being on track to off-track for graduation in a matter of weeks, indicator analysis alone may not provide a complete picture to guide school leaders’ actions. Approaches that capitalize on high-frequency data updates and treat risk for dropping out as a continuous measure can add more value. These iterative models tell school leaders, for each student at a point in time, the likelihood of graduation and of meeting milestones required for graduation (e.g., advancing to the next grade, passing a course). These iterative frameworks allow models to be updated constantly as contextual factors change or new information becomes available and can be used to answer evaluation questions that address school initiatives.

How can leadership teams effectively use early warning systems to prevent students from dropping out?

There is no “one size fits all” formula for how schools should construct their systems of data, collaboration, and intervention; it is critical for team members to have input on how the processes will work to fit the needs of their own environments. However, implementation of an EWS should begin prior to the start of the school year, with time spent gaining staff buy-in and enriching their understanding through professional development. This early collaboration allows leadership teams to parse through processes, roles, responsibilities, and questions before the school year begins (Herzog, Davis, & Legters, 2012). During the school year, the leadership team needs to meet frequently, at least twice a month, to review the data on students and their progress (Mac Iver & Mac Iver, 2009). The data must be shared with classroom teachers as well, but too much data can be overwhelming (Bruce et al., 2011). Some schools and districts have found that organizing the data through specialized lists, data dashboards, or color coding can help teams sort large data sets of at-risk students to quickly hone in

on individual students’ barriers or struggles. As stated above, data should be consistently accurate and current, with focus lists of targeted students being dynamic and open to change as new needs arise or progress is made (Herzog et. al., 2012). Educators may need help in using early-warning data to improve student achievement and outcomes, and outside support organizations such as higher education institutions or nonprofits may provide assistance. Additionally, finding time to collaborate with colleagues to analyze data may be challenging; schools must allocate sufficient time for teachers to meet, discuss, and reflect on data in order to make informed instructional decisions (Pinkus, 2008).

An EWS presumes that there is also an existing system of tiered interventions at the school, in which the first tier has established a strong foundation for all students; for example, attendance and behavior policies or 9th grade transition activities should serve as “preventive” strategies (Pinkus, 2008). The second tier, “group strategies,” should focus on the 10–20% of students who may need additional supports beyond the school-wide approaches. The final tier of “individual strategies” are for the 5–10% of students whose needs are so extensive that they need one on one supports, such as tutoring or counseling (Mac Iver & Mac Iver, 2009; Pinkus, 2008).

Mac Iver and Mac Iver (2009) recommend compiling a second team of adults, made up of partner organizations, community members, and social service professionals, to provide services to targeted students. Teams are encouraged to leverage all available resources, such as community partnerships, to surround students with support; some of these adults should be “near peers,” who are close in age to the students and can be positive role models for them. Schools forming these relationships should take care to adhere to the privacy rights guaranteed to students and their families by the Family Educational Rights and Privacy Act (FERPA; Bruce et al., 2011).

Indicators to Support the Effective Practice

The Leadership Team monitors rates of student transfer, dropout, graduation, and post-high school outcomes (e.g., student enrollment in college, students in careers) using a longitudinal data system.

The Leadership Team implements, monitors, and analyzes results from an early warning system at the school level using indicators (e.g., attendance, academic, behavior monitoring) to identify students at risk for dropping out of high school.

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