Using Early Warning Indicators to Change Instruction and Other Structural Supports for Students

Setting & Context: Your middle school is in a district that is one of the five largest school districts in the country. The district has been focused on reducing the high school dropout rate at the same time that it has redesigned curriculum and instruction on preparing students for college and career readiness. The district dedicated staff and data to work with an outside technical assistance organization to help the district identify local early warning indicators in order to focus practice on prevention of failure to complete high school.

A primary goal of the district's initiative was to prevent high school dropouts by identifying, as early as possible, those students most likely at risk. This process was conducted while simultaneously using the early identification of potential dropouts to:
- proactively create student support systems;
- enable smooth transitions from middle school to high school; and
- develop individual student interventions and the mechanisms, both data and teacher support teams, to closely monitor academic behaviors.

The study to identify the local early warning indicators conducted a review of what other researchers have found to be factors associated with students who eventually leave the education system. Those factors include:
- student absenteeism rates (below 80%);
- reading and math below grade level by the end of 8th grade;
- number of F's;
- number of credits attained in core content courses;
- low GPA (below 2.00);
- performance avoidance (hiding one's effort or not engaging effort due to embarrassment or fear of failure); and
- academic growth mindset (believing that intellect is malleable and can continue to grow with effort) (See Gross-Loh, 2016).

Growth Mindset data was collected through student and parent surveys of all 8th and 9th grade students. Other factors that affect student dropout rates are student ethnicity, English language status, poverty levels, and impact of special learning needs (students with an Individual Learning Plan or IEP).

The researchers used student data collected in previous years to reveal the patterns of relationships between the elements mentioned above and those students who dropped out. A key question was focused on learning the extent to which the factors could be identified by 8th grade that would predict which students were at greatest risk.

Teachers in your middle school have long believed that attendance and homework completion were the most critical factors impacting students' success in their classrooms. The researchers' analysis, however, revealed that low attendance was only an indicator when associated with other factors. There were numbers of students "off track" for

continuing their schooling who did not have low attendance in the 8th grade. Early warning indicators were found to be more complex combinations of indicators and such that a causal link between any single factor and dropping out was impossible to verify. They did however, find "in combination with one another, 8th grade indicators identified more than three quarters of the students who eventually fell off track in the 9th grade" (see Snipes & Tran, 2016, pp. 1 and 20-21). The composite indicator of attendance, credits, F's, or low GPA was identified as one of the highest predictors, while other combinations of these were also predictive.

Following the districts' release of the report, your middle school is determined to apply the findings and to identify as early as possible those students with the greatest potential risk of dropping out. Your principal, Mr. Alvarez formed a school-wide team to analyze current student data and to begin to research and suggest appropriate group and individual support systems, individual student interventions, and possible changes in school policies and structures. While those recommendations were being formulated, content and grade level teams turned their attention to instruction by examining their own growth mindset practices with regard to student feedback and instructional strategies designed around supporting student engagement at higher levels. The school team has returned to school early in August prior to the traditional time for teachers to return. The team will examine data for the current incoming 8th grade class.

School Demographics: This school has approximately 425 students, representative of the district's diversity with 45% Hispanic, 30% white, 15% African American, 3% Asian, and 2% Native American. The grade 8 class is anticipated to have 125 students this year. Sixteen percent of the students have IEPs and 35% are English Language Learners. Your school's poverty level matches that of the district, with nearly 50% of students eligible for free and reduced lunch assistance.

School Team: Mr. Alvarez, the school principal; feeder elementary school representatives (2); district office representative; special education teacher; ELL instructor; school counselor; school social worker; content area teachers; and data specialist.

Team Goals: Review student early warning data, explore underlying causes, and align students with appropriate interventions and supports. Explore group or school-wide changes that may meet the needs of a broader range of students. Initiate continuous monitoring of students who display risk flags to improve the team's ability to assign appropriate interventions or supports and make mid-course corrections if a student or group do not respond to interventions.
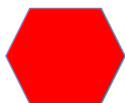
Analyze the Data: Your task is to examine multiple sets of student data and to apply the findings of your district's research in identifying 8th grade students at risk of dropping out of schooling after 9th grade.

Data sets include: student absentee rates, GPA, Growth Mindset survey results, number of F's, a sample set of student profiles, and a sample attendance record.

1. Based on analyses of the data sets, how many students do you identify as "at risk."

2. Are there some students you would predict are at greater risk? Why?

3. Which data sets did you analyze? Describe the relationship of each data set to the conclusions you reached or the new questions that you now have.

4. Were there sets of data or individual student records you would want to include in your analysis? Describe the data and tell why it would be important to you to see that data.

5. Are there additional data that you would now want to analyze in light of the data you already examined? Why? Explain your reasoning.