Elementary Indicators of 8th Grade Proficiency

Early warning indicators provide alerts for students in grades 3-6 to provide school administrators, teachers, and parents a tool to identify if a particular student is currently on pace to be proficient in Math, Reading, and/or Science in the 8th grade, as measured by the North Dakota State Assessment. These indicators operate in a similar fashion to the current Career and College Readiness indicators for students in grades 7-12, which provide insight into a student's readiness for post-secondary coursework.

There are a number of reasons 8th grade proficiency was chosen as a goal for elementary students in North Dakota. It is the last year of NDSA testing for students prior to the 11th grade testing, so it would provide a measure of a student's proficiency level before entering high school. It is also positively correlated with a student's future performance on the ACT, an important assessment for both measuring post-secondary readiness and state scholarship eligibility. Finally, 8th grade students who have a higher number of proficient subjects in 8th grade seem to both graduate on time and enroll in NDUS after graduation at a higher rate than 8th grade students who have fewer proficient scores on the NDSA.

Number of Proficient Subjects	Percent of Students	Average ACT	ACT of 24 or above
0	10.8%	15.07	0.2%
1	12.3%	17.22	1.2%
2	18.0%	19.06	7.2%
3	58.8%	23.43	48.4%

Table 1: Summary of ACT Performance by Number of 8th Grade NDSA Proficient Subjects

Number of Proficient Subjects	On-Time Graduation Rate	NDUS Enrollment Rate
0	76.7%	26.2%
1	88.1%	39.7%
2	92.4%	46.9%
3	96.5%	58.7%

Table 2: On-Time Graduation and NDUS Enrollment Rates by 8th Grade NDSA Proficient Subjects

Figure 1: Sample Student Snapshot

Risk levels for students are displayed in the "Early Warning Indicators" tab, and a distinct risk level is calculated for each subject. The score column represents the current estimated probability of a student scoring proficient or above on the 8th grade NDSA in the indicated subject. The trend column shows whether the estimated probability has increased or decreased since the previous grade.

In all models, approximately 90% of students identified as being at Low Risk score proficient on the 8th Grade NDSA test in the indicated subject. Approximately 65% of students identified as being at Moderate Risk achieve a proficient score on the 8th Grade NDSA in the indicated subject. Finally, approximately 40% of students identified as being High Risk in a subject achieve a proficient score on the 8th Grade NDSA in the indicated subject.

The accuracy of the indicators increases with grade, from approximately 76% of students correctly identified in 3rd grade to approximately 82% of students correctly identified in 6th grade.

The significant factors used to determine a student's likelihood of proficiency are the following:

- NDSA Math, Reading, and Science scores

- Free/Reduced Lunch status

- Gender

- IEP