

From: Adam Larsen, Assistant Superintendent

To: Board of Education

- Cc: Thomas Mahoney, Superintendent
- Re: September 2021 Board Report

Schoology Implementation

The implementation of our new learning management system (LMS) is fully underway. Teachers participated in online training in the early spring and were provided an opportunity to experiment with the system during late spring and over the summer. As with any software implementation, we have encountered a few challenges along the way. Of primary concern is the sheer number of learning tools that we are working on integrating into Schoology so they can be used easily with our students.

Schoology can best be described as a canvas on which the teachers and students work together. Teachers can curate hyperlinks, activities, and assessments, but they can also pull in resources from the various free and paid learning tools that exist online. These tools include resources such as the Beyond Textbooks curricular materials and assessments, HMH materials, IXL, ThinkCERCA, Scholastic Scope, Khan Academy, and the list continues. Each one of these tools will work with Schoology; it is just a matter of finding the best synergy between the tools so teachers and students can navigate quickly and easily.

The best integrations are ones where clicking a link will automatically log a teacher into the other platform, and then he or she can choose an activity or an exercise for the students to do. On the student side, clicking the link takes the student to that activity, the actions taken are logged, and the results are fed back into Schoology. Some tools do this well, while others limit their level of integration to a simple link. As we bring more tools into the platform, teachers become more reliant on using Schoology to share academic work with students.

The built-in assessment tool is working well for the teachers who have tried it. The assessments built in Schoology can have a variety of question types, and for many of those types, they will automatically score upon student completion, post the score back to Schoology, and sync the data back to PowerSchool for reporting purposes. Assessments which require teacher scoring also simplify that process to teachers do not have to engage in double entry of data. Additionally, teachers can score according to rubrics and provide feedback to students aligned to these rubrics.

Another challenge is figuring out the best way to use Schoology with our younger students. The LMS relies heavily on text and less on iconography, so our emerging readers may not be able to navigate the system without some assistance. Some of our teachers are experimenting with a newly-offered "Elementary Experience" in the system while others are turning to folders of different colors and other organizational structures which may suit their needs.

Teachers are still learning the platform as they go. Given the stressors of the past 18 months, we know that we are not acquiring the necessary skills to use the tool as rapidly as we might in a normal year, but we are encouraging teachers to try as much as they can and use Schoology where it seems appropriate. We currently plan on rolling the parent portal out in the middle of this year, so there are still a few months before that constituency is in the system and



asking about what is or is not in the system. We will continue to monitor how teachers are using the platform and support them as they learn and change their practice.

2021 Illinois Assessment of Readiness Data

In Spring 2021, students completed the second administration of the Illinois Assessment of Readiness (IAR) test. This is the resumption of the assessment after it was canceled in 2020 due to the COVID-19 closure. We again used the Pearson Access Next (PAN) platform for administering the assessment. While the Illinois State Board of Education (ISBE) has awarded a new contract for IAR to another company, Data Recognition Corporation (DRC), legal and other issues have prevented ISBE from extricating itself from the Pearson system. At this time, we expect to give the 2022 IAR on the Pearson platform once more.

As with the previous assessments, ISAT and PARCC, we analyze the IAR data alongside the data from NWEA Measures of Academic Progress (MAP) to see how these percentages compare. We start by looking at the simple percentages by grade level and subject. That graph follows.







Because we spend a great deal of time predicting future scores for the purposes of intervention, it is worthwhile to study the accuracy of the MAP-IAR relationship at the individual student level as well. This is useful information in deciding whether to continue use the MAP test in the future.

The present approach involves identifying the types of possible errors and indicating their prevalence in the statistical sample. This analysis supposes that the default condition of a student is to meet expectations on the IAR. This is referred to as the *null hypothesis*. For each student, the MAP test is used to identify students where the null hypothesis should be *rejected*, which would indicate that he or she will not meet expectations on IAR. When a student is predicted to meet expectations on the IAR, it is said that the null hypothesis *fails to be rejected*.

At the time of prediction (Fall MAP), there are two conditions in which a student may fall: predicted to meet expectations or predicted not to meet expectations. At the time of the final assessment (Spring IAR), there are also two conditions: meeting expectations, and not meeting expectations. For simplicity, these conditions are referred to as *over* and *under* (short for *over the bar* and *under the bar*) going forward. When these two sets of conditions are crossed, a table such as below emerges:



Academics | Activities | Service | Leadership

		Actual Performance (Spring 2021 IAR)	
		Over	Under
Predicted Performance (Fall 2020 MAP)	Over	Correct	Type II Error
	Under	Type I Error	Correct

Predict: Over, Actual: Over – This student was correctly identified as **not** being at risk for falling below expectations on the IAR. This is commonly referred to as a "correct miss."

Predict: Under, Actual: Under – This student was correctly identified as being at risk for falling below expectations on the IAR. This is commonly referred to as a "correct hit."

Predict: Over, Actual: Under – This student was predicted to meet expectations on the IAR, but fell below on the actual test. This type of incorrect prediction is known as a Type II error in research. In practice, this is a student who "fell through the cracks" of the intervention system. Because the student was not expected to score below the state-mandated benchmark, he or she was likely not targeted for additional intervention designed to remediate the skills in which the deficiencies lie. An alternative hypothesis is that the student had a bad test day when he or she took the IAR.

In the school setting, a Type II Error is considered worse than Type I because the student was not identified as needing additional assistance when it probably would have helped.

Predict: Under, Actual: Over – This student was predicted not to meet expectations on the IAR, but performed successfully on the actual test. This type of incorrect prediction is known as a Type I error in research. In practice, this is a student who was targeted for intervention, and the intervention was successful in bringing that student up to expectations by the time of the IAR. An alternative hypothesis is that the student had a bad test day when he or she took the MAP.

In the school setting, a Type I Error is considered more acceptable than a Type II error, because students on the bubble are being over identified for intervention. These students, while they did meet expectations on the IAR, may have only done so because of the intervention in place.

The rates of these two types of errors are related. If high cutpoints are used for identification, then more Type I errors will be committed. Lowering the cutpoints results in a lowered Type I error rate, but a higher Type II error rate. The selected cutpoints strike a balance between these two.

The percentage of students falling into each of these four cells was computed and plotted for visual inspection:







Conclusions

The concordance between MAP and the Illinois state assessment has begun to rebound after some years of somewhat unreliable data. This improvement is more pronounced in Mathematics than it is for ELA. For a couple of years with PARCC and for the first year of IAR, we saw more students than we would like who were predicted to score above the benchmark based on fall MAP but failed to reach that target on the spring IAR. This gap has somewhat narrowed in the 2020-2021 school year. Correlations are fairly strong, and that number of students who failed to meet expectations has slimmed. In ELA, the Type II errors do outpace the Type I errors in some grade levels, which means students are likely missing out on targeted intervention.

The most remarkable thing to note in the 2020-2021 data is grade 3, both in ELA and Mathematics. At first, it is important to observe just the raw percentage of students who met or exceeded on the spring 2021 IAR. The difference between this grade and the others is apparent, particularly in Mathematics. When we examine the prediction/outcome data for this grade, an even more interesting trend emerges, again, in Mathematics. In this grade and subject, 38% of the students were predicted not to meet on spring IAR but actually ended up meeting. This could be due to multiple factors, including poor performance on the fall MAP. However, it could also represent strong performance by the grade 3 team in identifying struggling students and building instruction and intervention around those needs. In talking with the building leadership, it appears that this team has fully embraced the reteach & enrich philosophy found in the Beyond Textbooks resource, and that may lead to more successful outcomes.

As with any exploratory research of this type, it is difficult to draw causal conclusions about why certain outcomes are observed. However, knowing the time and energy that were poured into building an intervention framework, and knowing the assessment results from the end of the year, it also difficult to ignore the likely story about teachers making the best use of time and resources to meet the needs of their students.

Respectfully Submitted,

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