

Making Sense of Data for School Improvement

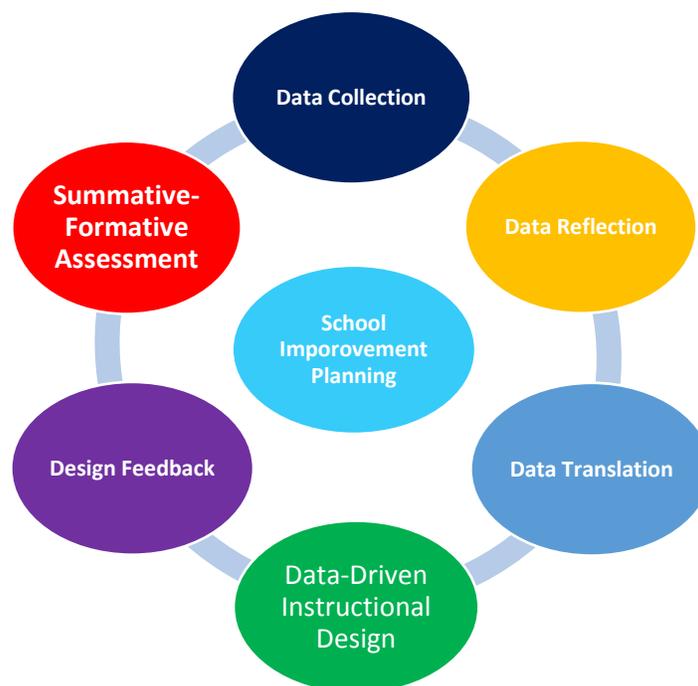
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As summer approaches and the school year ends, we shift our attention toward planning for the upcoming school year and thinking about ways to make our schools and districts even better. What new programs or materials do we need? What technology or devices do we need to purchase or update? Can we adjust the school schedule (bell schedule) allowing for more instructional time or flexibility? What academic areas are we succeeding with and which areas do we need to improve? How do we decide what to purchase, what areas we need to improve or what to celebrate? We look at and analyze data – all sorts of data.

School districts are rich with data; it is the organization, interpretation and utilization of that data that seems overwhelming at times. The focus of this article is to offer suggestions for organizing and utilizing your school data for school improvement planning. There are several steps to the school improvement process that I refer to as the Data-Driven Instructional System Model including: Data Collection, Data Reflection, Data Translation, Data-Driven Instructional Design, Design Feedback and Summative/Formative Assessment.

Data-Driven Instructional System Model (DDIS)



Data Collection

Data is everywhere in schools. Examples of data include student learning data (grades, test scores, teacher checklists, etc.); perceptions data (school beliefs and values, student/teacher/employee attitudes, observations), demographic data (attendance, grades, ethnicity, gender, graduation rate, enrollment, grade level, socio-economic status, etc.) and process data (programs and processes).

School improvement planning and success depend on how we use this data. What pieces of information are important? What information can we gather and analyze that will help us determine how to improve? More importantly, what questions can we ask and answer with the data we have? For example, if you discover that your students are not scoring well in math at the middle school level on the Wisconsin Forward exam, what other evidence do you have that can help identify the cause of this low performance? Are they also not scoring well in their math classes? Are they attending school regularly or is there an attendance issue that could be influencing their performance? Is there any particular grade level that is doing better than other grade levels? Maybe your school recently purchased a new textbook for math and students are having a difficult time understanding the concepts.

The collection of data, storing data, and the analysis of data are crucial to successful school improvement planning. Data will guide your questions and lead to hypotheses to prove or refute. Without data to analyze, your school improvement plan will be based more on feelings and thoughts rather than on facts and information.

At first, the collection of data may seem like a daunting task. What data should you collect? Who will collect it? How will it be collected and when? Where will it be stored? How will you get the data you need when you need it? There are several data system solutions on the market today that can assist with this data discovery. Find one that was designed with educators and students in mind that fits the needs of your district.

Data Reflection

Once you have collected the data that you think you need to analyze, then it is imperative to spend some time doing the hard work of analyzing the data to see what you can uncover. Providing time for teachers and administrators to do that work is essential. The expectation in schools that are great is that teachers and administrators look at their data and make decisions based on what they see in their data. In order to do that, dedicated time to data analysis must occur. While teachers and administrators are using data every moment of every day, an in-depth analysis for school improvement planning requires numerous scheduled, structured data analyses sessions.

The best way to do this is to dedicate time (typically during the summer) for a Data Workshop. Build a team of participants who are instructional leaders in your school who can look at, analyze, and interpret data. This dedicated data analysis time becomes the foundation of your school improvement plan for the upcoming school year. Needs are identified and action plans are developed to address the identified needs. Measures must be put in place to discern if the action steps are leading to the desired school improvement. If the action steps are leading to measureable improvements, great. If you are not seeing the improvement you would like, then you need to adjust the action plan accordingly.

Data Translation

Data Translation refers to the big changes that occur in a school or district based on data. Let me give you an example of this.

During data collection, perhaps you discovered that the lower math performance you identified earlier was occurring during the morning hours of math instruction. You also discovered that all of your school assemblies were occurring in the morning so students who had math in the morning were missing more instructional time than students who were in afternoon classes. Based on this information, you adjust your daily schedule for assemblies so that the morning math students still get their math instruction by shortening class periods throughout the day and running a special schedule just on days when you have school assemblies.

Another example of Data Translation would be implementing a new program based on data. In this case of low math performance, you decide as a school data team that you are going to implement a math intervention program. Since you have Title I for reading, your team decides that you also need a program that provides extra support in math. Adding this program would be an example of Data Translation. Any decisions that change programming at the school level would fall under the Data Translation component of this model.

Data-Driven Instructional Design

This is where the rubber hits the road! Using data to change classroom instruction is at the heart of the data-driven instructional system model (DDIS). Using data to change what instruction is delivered in the classroom daily is what will really increase your student performance and help you meet your school improvement plan goals. What does this mean?

Every day teachers are formally and informally collecting data on the students in their classrooms. The key is to utilize that data to adjust classroom instruction. Adjusting instruction at the classroom level is not an easy task. Typically, teachers have 25-30 students in their classroom who can be at all different places instructionally. Using the data to plan instruction based on the identified needs of students is time consuming.

Utilizing technology in the classroom is a great way to provide more instruction through a digital platform while the teacher can provide more personalized instruction to small groups of students. Employing a digital resource that provides personalized learning for students at their level gives the teacher the freedom to work with all students in small groups with targeted lessons. Multiple digital resources on the market today address this need. Schools just need to find that resource that best fits their model of instruction and provides the most direct instructional resources.

Design Feedback

Design Feedback represents a time for re-evaluation. This is an opportunity to check if your action plan is working. Back in the Data Collection phase of the school improvement process, you set goals and developed an action plan. You put measures in place to determine the success of your school improvement plan.

A midyear review is a great time to celebrate what is working and change what is not working. It is also a great time to re-focus efforts to address the action plan.

Summative/Formative Assessment

Measuring success with any school improvement plan is crucial. The best way to measure success is to use summative and formative assessments. All types of assessments are used in school improvement planning – Wisconsin Forward, district screener, progress monitoring tools, benchmark assessments, common assessments, teacher checklists, running records, teacher observations, etc. These assessments provide the basis for your school improvement plan and should be used to measure success based on your goals. If your goal on your improvement plan is to improve math scores on your district benchmark assessment, your action plan should list the things you are going to do to make that happen. Then, when you assess again, you can analyze whether your actions helped you fulfill your action plan goal.

Summary

Planning for school improvement is really about setting goals based on data, evaluating your success periodically throughout the year and changing things along the way – again based on data that you have analyzed. When you break this process down into the six components discussed here, it does not seem so overwhelming. Utilizing data for school improvement is a journey, not an event. It is an ongoing process that is in motion throughout the school year. Just like great teaching, a great school improvement process involves ongoing, flexible instruction that best addresses the needs of students based on data. Find the data solution that will help you organize your data in a way that makes it easily accessible to those who need it. Once you have the tools and the system in place, you will see that using data for school improvement is truly the most efficient way to improve student achievement.