Your Role on Data Analysis Teams

Maximizing student achievement is one of the most important goals for all educators. Collecting, analyzing, and responding to student data have been shown to be effective ways of improving the achievement levels of all students. The data-based, decision-making process allows teams of educators to make instructional decisions by relying on sound achievement information, thus maximizing the effectiveness of day-to-day teaching. As a data team member, you need to understand the team process and your role in the process.

Data Analysis Teaming

Data analysis is the act of taking raw data and turning it into useable information. Analyzing the data collected from assessments, classroom performance, and teacher observation is what allows teams to make instructional decisions that will improve their students' achievement levels.

Data based decision making uses student data to guide the design, implementation, and adjustment of classroom instruction. Data based decision making provides schools with the opportunity to build capacity among staff members to use data effectively to improve student results. By using data, school teams become empowered to make the most informed decisions to increase student achievement.

Staff examine data to identify and investigate any achievement or opportunity gaps. Staff are trained in the use of data analysis techniques that include consideration of such factors as multiple types of data, multiple sources, comparisons across groups, benchmarking, and longitudinal data. Data analysis occurs on a continuous basis, and staff members frequently collaborate to make adjustments in the school-wide plan as well as in classroom practice. Instructional decision making is universally based on the expert use of robust data.

Data sets/packets are prepared for the meeting in a teacher-friendly format and provided to the team (teachers and other school personnel) in advance. The principal identifies the session facilitator who is trained in team facilitation, as well as a timekeeper and note taker. The principal also arranges meeting logistics, including the date, time, place, and agenda.

A common characteristic of successful school teams is shared ownership of the data and the achievement levels of the students in the school. When administrators and teachers from general, remedial, and special education work cooperatively, schools have the greatest opportunity to maximize the achievement level of every student.

Three levels of data analysis teaming have been identified as ways to evaluate and improve the effectiveness of instruction within a school: Building-Wide Teaming, Grade-Level Teaming, and Student-Level Teaming.

Building-Wide, Data-Analysis Teaming

A building-wide team analyzes student achievement and behavior data. This team is typically comprised of the principal or designee, classroom teachers, and specialists such as school psychologists and reading and math specialists. It is essential that the expertise and perspective of classroom instruction be represented on the team. The function of the building-wide, data-analysis team is to develop an understanding of student achievement across grade levels.

The team uses summative assessment data such as Pennsylvania System of School Assessment (PSSA) and Pennsylvania Alternate System of Assessment (PASA), benchmark assessments, and behavioral data such as attendance and office discipline referrals.

Using a structured team facilitation process, the building-wide team identifies the current academic performance at each grade level relative to specific benchmarks and identifies areas of strengths and weaknesses relative to grade-level standards.

Guiding questions during the meeting may include:

- Is the core curriculum instruction resulting in 75 to 80 percent of students who are reaching grade-level benchmarks?

- What additional instructional resources do our students need in order to be successful?

- Is instruction working for some groups but not others?

- What professional development will improve our teachers' instruction?

Grade-Level, Data-Analysis Teaming

Grade-level teams meet at least three times a year to review benchmark data from universal screening. Data should include assessment of the Big Ideas of reading and appropriate grade-level process and content standards in math. Members of grade-level teams include the principal, all teachers from the grade level, and staff who provide instructional support to teachers and students.

Teachers are better prepared to discuss student data when they are provided with a set of written prompts to use when looking at data before the meeting (e.g., How are our students doing on measures of Initial Sound Fluency?), as well as prompts to think about what they are doing now (e.g., How much time have we been spending on teaching beginning consonant sounds?).

The grade-level team identifies current performance levels for their grade level on relevant benchmarks for their grade. The team specifies the percentage of students at high risk, some risk, and low risk. Grade-level teams set measurable goals and develop plans to implement strategies to achieve those goals. Goals should be presented in terms of specific percentages and numbers of students (e.g., "We have 73 percent of students at low risk on Nonsense Word Fluency at the winter assessment. We will increase that to 85 percent by spring.") See Figure 1.

Figure 1: Sample Data Chart

Winter DIBELS Assessment First Grade			
	Low Risk	**Some Risk**	**High Risk**
Phoneme Segmentation Fluency	85%	12%	3%
Nonsense Word Fluency	73%	18%	9%
Oral Reading Fluency	74%	15%	11%

Grade-level teams use screening and benchmark data to select research/evidence-based strategies in planning whole class interventions. In addition to being research based, interventions should be practical and readily available. The team plans the logistics of implementing the strategy, including teacher self-monitoring of strategy use and a process for teaching strategies to novice teachers when necessary.

Guiding questions during the meeting may include:

- In our grade level, what percentage of students is at high risk?

- What percentage is at some risk?

- What percentage is at low risk?

- What goal do we want to reach by our next review date?

- What interventions have a good research base? Of those, which are most practical?

- What materials do we have available?

- What materials do we need?

Once decisions have been made about instruction, the core program and any interventions identified will be implemented. Research-based programs must be delivered as they were developed, and it is essential to ensure that the core program and interventions are implemented with fidelity. Teachers monitor the fidelity of their instruction and should have access to additional training on the intervention, if necessary. Teachers are encouraged to continue to adjust instructional "practice" based on classroom performance and observation.

Student-Level, Data-Analysis Teaming
The purpose of student-level, data-analysis teaming is to compare individual student performance to grade-level benchmarks. Those students who demonstrate a deficiency in foundational skills are at high risk and will need additional academic support to attain end-of-the-year benchmark goals. Interventions are designed to address instructional needs identified through the analysis of screening data, diagnostic assessments, and

classroom performance. When interventions are implemented, the student's progress is monitored on a regular basis. The frequency of the monitoring, the assessment tool that will be used, and who will do the monitoring should be determined during the team meeting. Based on progress monitoring data, classroom performance and observation, teachers are encouraged to continue to adjust instruction or fine-tune a strategy.

Guiding questions during the meeting may include:

- Which students may need additional instructional support?

- Have we ruled out reasons such as bad day, illness, shyness, etc., for poor performance?

- What skills should we teach?

- For each student, what are the goals of instruction?

- When do we want to reach the goals of instruction?

- How will we monitor progress toward the student's goal? How often will we monitor? Who will do the monitoring?

Sources of Assessment Data
Effective data teams rely on an array of assessments to collect data on student achievement. The Pennsylvania Department of Education (PDE) has identified Fair Assessment as one of the components of a Standards Aligned System (SAS). Fair Assessment is a process used by teachers and students before, during, and after instruction to provide feedback and to adjust ongoing teaching and learning to improve student achievement. PDE promotes the use of formative, benchmark, diagnostic, and summative assessments as they allow teachers to offer effective instruction based on data.

Formative Assessment is classroom-based assessment that allows teachers to monitor and adjust their instructional practice to meet the individual needs of their students.

Benchmark Assessments are designed to provide feedback to both the teacher and the student about how the student is progressing towards demonstrating proficiency on grade level standards.

Diagnostic Assessments are used prior to instruction to ascertain each student's strengths, weaknesses, knowledge, and skills. This information enables the teacher to provide remediation and adjust the curriculum to meet each student's unique needs.

Summative Assessments seek to make an overall judgment of progress at the end of a defined period of time. They are considered high-stakes assessment and the results are used within the federal and state accountability systems as required by the Every Student Succeeds Act.

Summary

Data analysis team meetings are a vital part of creating curricular improvements, designing interventions, and deciding which students will benefit from additional instruction. Using a team approach to data analysis allows teachers and staff to all be involved in planning for every student's academic performance.

Resources

AIMSweb. [Online]. Available: www.aimsweb.com

DIBELS (Dynamic Indicators of Basic Early Literacy Skills). [Online]. Available: http://dibels.uoregon.edu

Intervention Central: Curriculum-Based Measurement Warehouse. [Online]. Available: https://www.interventioncentral.org/curriculum-based-measurement-reading-math-assessment-tests

Kovaleski, J.F., Robie, M., & Agne, M. (n.d.) *The RTI Data Analysis Teaming Process*. [Online]. Available: http://tinyurl.com/rtinetwork-org

National Center on Student Progress Monitoring. [Online]. Available: www.studentprogress.org

Pennsylvania Department of Education. *Pennsylvania Standards Aligned System*. [Online]. Available: http://www.pdesas.org

What Works Clearinghouse. [Online]. Available: https://ies.ed.gov/ncee/wwc/

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