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Getting Data Off the Shelf

The Basics of Data Management for Catholic School Leaders

A review of the *library of Catholic School Management Letters* shows a clear focus on the non-academic aspects of Catholic school leadership. Whether it is administrative and governance structures, business affairs, communication, marketing, or development, all of these are vital skills for the contemporary Catholic school leader. These are also areas for which preparation and training have been decidedly lacking. These CSMLs and other resources work to fill the gaps in training and experience by providing sound research-based tools for planning and managing school programs through sound policy, effective practices, and involvement of the most qualified people.

However, just as the business realities of Catholic schools have shifted, the academic realities have changed as well. New tools, techniques, and resources have changed the landscape of education in all subjects completely and irrevocably. And like the evolving realities of the business of schools, most school administrators have not been sufficiently trained in these new techniques. The majority of principals and other school leaders come from the teaching ranks, but many have left the classroom prior to the technology and data revolution, so may lack the hands-on experience of managing today's classroom.

Effective leadership and management of an academic program requires contemporary management skills. Data collection, and more importantly, reading and reacting to data, is probably one of the greatest of these skills.

Data has become a sacred code word in modern education. Everyone knows it is a good thing; everyone knows that it should be collected (and probably the more the better); and everyone knows that it should be used. Academic Excellence Standard 8 of the *National Standards and Benchmarks for Effective Catholic Elementary and Secondary Schools*, Benchmark 8.1 reads, "School-wide and student data generated by a variety of tools are used to monitor, review, and evaluate the curriculum and co-curricular programs; to plan for continued and sustained student growth; and to monitor and assess faculty performance."

Most school self-studies and accreditation reports begin with comments about insufficient collection, disaggregation, and use of data. However, there is seldom a clear explanation of why data is so magical and what effective (and efficient) data use looks like.

The Data Revolution

We live in a data-rich environment. We are surrounded by numbers, from calories on fast-food menus, to mileage on our dashboards, to heartbeats and steps on our wrists. The information age floods us with, well, information, but merely collecting and recognizing data without reading, adjusting, and re-reading is like collecting chess pieces without playing the game. Thus we adjust our driving to save gas, or better, get out of our cars and take more steps to burn off the fast-food calories.

Teachers and education leaders have become stronger and stronger at the *art* of teaching, making material accessible, recognizing student needs beyond those of the classroom, and using multiple instructional methodologies.

There is a lack of trust and, in fact, a distrust for the *science* of teaching, using data to accurately prepare the best strategy to get the best results for every student.

Disparaging comments about over-testing and teaching to a test display this prejudice and an essential lack of understanding of the value of data. Part of educational leadership is communicating the importance of data-based instruction and creating environments where data collection, data analysis, and data-based adjustments can take place.

Sorters vs. Teachers

One of the difficulties schools face in embracing a clinical, data-based approach can be traced to the complex and changing view of the role of teacher. The traditional role that most teachers, principals, and parents grew up with has been supplier and sorter. The teacher, as expert, provided information to students (often in some form of direct instruction), and then sorted students by their ability to demonstrate mastery or retention of the material. Most traditional tests are essentially sorting tools to determine the “type” of students (hence the simplistic labels A student, B student, C student, etc.).

This process and these labels are so ingrained in our system (adults are sometimes heard to say, “I was a C student in school,” as if that were the sum of their identity) that any suggestion of bringing all students to excellence is met with suspicion, derision, and scorn.

A data-driven approach to instruction creates an entirely different paradigm of the teacher-student relationship. A teacher no longer passively supplies information, hoping for the best when testing comes.

The role of teacher becomes *diagnosing* where a student is relative to a standard, *selecting effective instructional techniques* to help students attain the skill or information, *determining* to what extent this has been accomplished in order to supply information to students and inform further instruction, and *closing the gaps* through further instruction or interventions.

The final goal in this model is not a neatly sorted and labeled class, but effectively matching strategy to need, in order to produce the greatest possible outcome for all.

The differences between sorting and teaching also can be found in the approach to standardized testing data. For too long (and despite claims to the contrary) these assessments have been used primarily as a sorting device, assigning all students a numerical ranking compared to their classmates and state and national groupings. While there is undeniable value to this use, particularly in using growth models to assess the current effectiveness of a school program, it ignores a larger possibility. Standardized tests provide rich and granular information about a student’s ability relative to a wide range of standards. A data-driven teaching approach can use this information to craft individualized and class instructional strategies.

CSM SERVICES

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Administrative Structure
Search
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Workshops and Webinars
Retreat Facilitation
Keynote Presentations
Individual Seminars and Series

Linear vs. Cyclic Instruction

Another way to view the difference between “traditional” and data-driven approaches is that the traditional approach is a linear process while the data-driven approach is cyclical or recursive. For each standard or unit, a non-data-driven teacher begins with some form of instruction, followed by student practice, followed by an assessment which yields results. While effective instruction can yield good results, this model does not reveal these results until the end. Likewise, there is little space in this model for reteaching unless students ask specific questions.

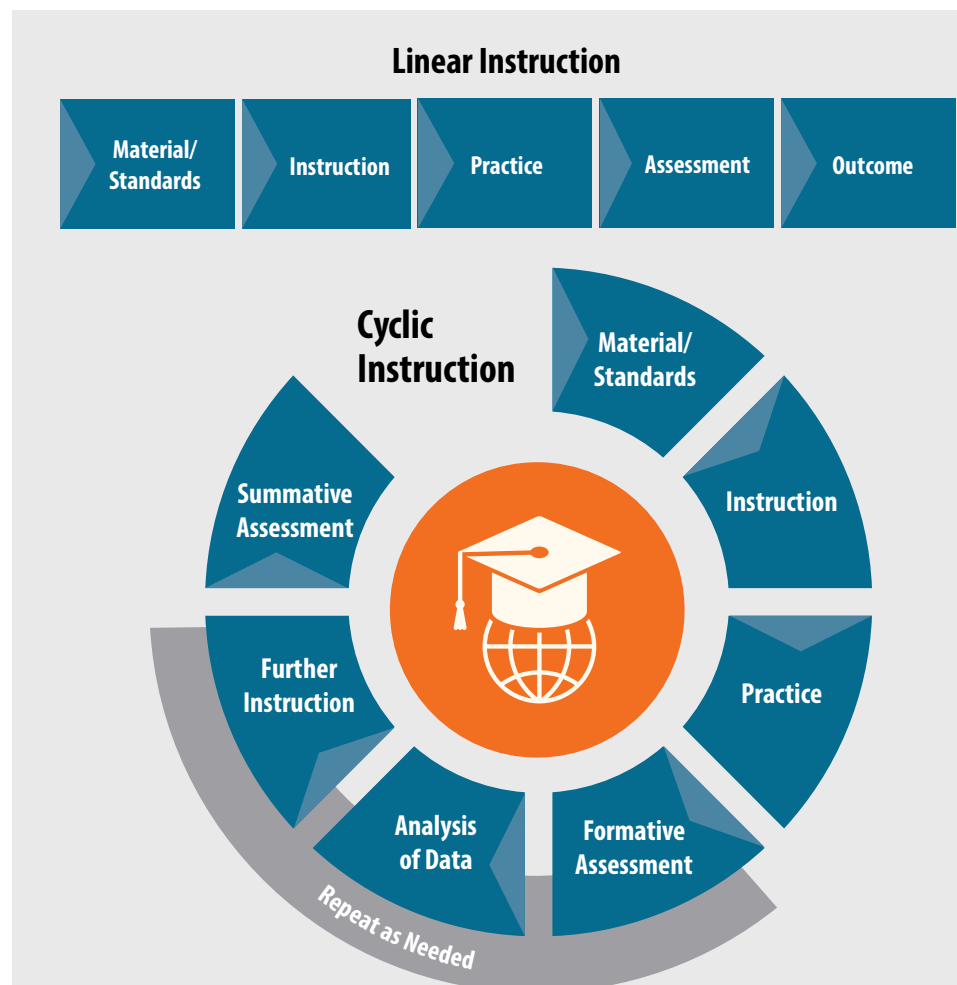
Student questions are often the least predictive of comprehension, as the most confused students usually don't ask questions.

Finally, in this model data is produced too late in the cycle to improve learning. Usually a final assessment is seen as a grade, nothing more, rather than as a learning tool. Standards that are not mastered are simply reflected in a grade and passed over.

Data-driven approaches gather information along the way which informs instruction. The process usually begins with some type of formal or informal diagnostic to determine the current level of understanding and set benchmarks for growth (another benefit of regular diagnostics is that they can often demonstrate what does *not* need further instruction). Using this and other student data, the teacher designs a variety of instructional experiences intended to help each student master the standard.

Formative assessment following instruction is essential to data-based approaches. A non-final (usually not graded) assessment supplies information to students about how they are doing and, more importantly, to teachers about how effective the instruction has been and if individual students require further intervention. By reading the data of formative assessments, teachers then return to appropriate instruction and further assessment until a final summative assessment where students demonstrate mastery of the appropriate standards. As part of the cyclic data-driven approach, these summative results should be more or less predictable.

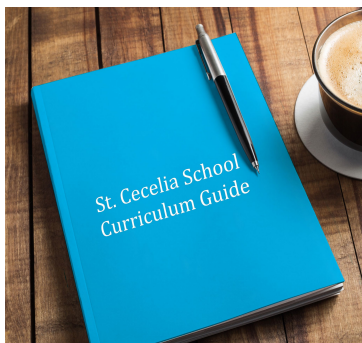
Two further points should be addressed. First, to suggest that teachers can be divided by whether or not they use data is ridiculous. Every teacher reads data daily, whether it is the attentive look in the eyes of the class, to an astute question from an unusual source, to a student who just seems “out of it” that day. What is being contrasted here is the instinctive use of data versus the systematic approach to data use. Second, no approach can completely correct for student motivation and capacity. Data-driven approaches are no panacea that guarantees perfect results. Rather, they work to bring every student as far as possible given all other variables.



Becoming a Data-Driven School

Schoolwide integration of data to form instruction does not happen accidentally. It requires leadership, training, and accountability. The following are six areas of focus in developing a data-driven academic program.

1 Curriculum Review



The foundation of a school's academic program is a clear, well-articulated curriculum. Establishing what students should know and be able to do is fundamental to data collection. Academic programs that are less than effective are usually a result of poorly developed or poorly understood curriculum standards.

While many tools of curriculum development are available, three principles are closely tied to data collection and use.

- ▶ **Alignment to standards:** Whether they are local, state, or national standards, it is vital that a strong curriculum be built on standards. Without standards, a curriculum is simply a gathering of material that cannot be effectively measured.
- ▶ **Benchmarks:** What does it look like when a student achieves a standard? Data measurement is based on benchmarks.
- ▶ **Clear articulation between grades:** If data is to be shared between grades, the progress of standards from grade to grade in each subject should be consistent.

2 Assessments



Faculty should have ongoing professional training in the development and interpretation of three types of classroom assessments.

- ▶ **Diagnostic:** Used to determine a student's current mastery of standards prior to instruction.
- ▶ **Formative:** Used to determine a student's mastery of material after instruction. Used to give information to students and to form further instruction.
- ▶ **Summative:** Used to demonstrate a student's mastery of standards. Used as the basis of traditional or standards-based reports.

3 Data Groups



In order to develop schoolwide consistency of data use, teachers should meet regularly in grade level or subject groupings to review classroom data. These groupings (often referred to as Professional Learning Communities) should be built around looking at student work relative to specific standards, not simply swapping lesson plans. These groupings help to keep the schoolwide focus on examining data while also addressing curriculum alignment from class to class and grade to grade.

Becoming a Data-Driven School (*continued*)

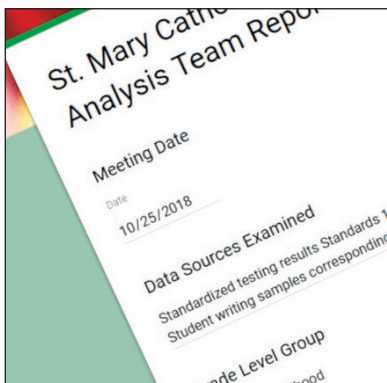
4 Systematic Review of Student Standardized Tests



One of the best “starting points” for a schoolwide focus on data-driven instruction is the standardized tests already taken by students. Contemporary testing services provide a great deal of disaggregated information about the performances of students as a group and as individuals. A schoolwide “test-reading day” should involve all teachers looking at data not as postmortem, but as an active step to address student needs and chart student progress. Among the considerations for an effective test-reading day might be ...

- ▶ **Growth:** Standardized test results have little to no meaning unless they are compared with previous results. Preparing a comprehensive testing packet for each teacher including current and previous testing information can increase the quality and efficiency of this process. Student growth is in many ways more significant than student performance. Are low scoring students making steady progress? Are high scoring students continuing to progress or stagnating? The effectiveness of a school program is measured by growth more than scores alone.
- ▶ **Focus Points:** Ask teachers to identify specific skills where there is clear need for improvement. Avoid broad areas (such as Language Arts) and focus on specific skills (such as sentence construction). Once a limited number of focus points have been identified, have teachers in grade level groupings develop a plan to address this specific need in the next testing period. These plans should be written and kept both by teachers and principal.
- ▶ **Testing the Effectiveness of Interventions:** It is fine to make changes to address needs, but if the effectiveness of these changes isn’t tested, the activity may not be useful. Prior to planning skill focus for the next testing period, the group should examine results of the last areas of focus and note what was done and if it has merit. This effectiveness data will inform choices and activities for the next testing period.

5 Reporting Findings



The essence of data collection is documenting data-based meetings of both the faculty as a whole and grade level groupings. Documentation of findings is an essential part of the process of data analysis. Each data group should produce a simple report of what was looked at and what the conclusions were from this examination and discussion. A Google Form can allow for ease of completion and provide access across the community without needless multiplication of paper. These records provide a clear insight to the principal regarding the current level of discussion and focus of teachers while offering a strong resource for teachers new to the school.



About the author ...

Gregory Dhuyvetter Lead Consultant

Gregory Dhuyvetter joined Catholic School Management with more than 35 years of experience at all levels of Catholic school education. He has served as teacher and administrator and has seven years of service as a superintendent.

Greg presents regularly at the National Catholic Educational Association Convention, the Catholic Leadership Conference and has twice been the keynote speaker of NCEA's national conference on STREAM.

Greg has published articles in Momentum Magazine, Houghton Mifflin Harcourt Journal of Educational Excellence and other journals. In 2016, Dhuyvetter was recipient of the Lead. Learn. Proclaim. Award from NCEA.

Greg received his BA and MA in English from Cal State University, Fullerton, where he taught for a number of years, and a master's degree in educational leadership from United States International University in Los Angeles.

Becoming a Data-Driven School (*continued*)

⑥ Marketing Schoolwide Data



Effective gathering, sorting, and using data to form instruction also provides excellent material with which to market and differentiate a school. Documented data about student performance in a variety of areas can serve as “fast facts” on the school webpage and other promotional materials. A section labeled “What the Data Demonstrates” will very effectively speak to millennial parents who are anxious to make data-driven decisions about their children’s future.

In a world that is replete with data and better and better tools for gathering, analyzing, and addressing all aspects of student performance, it is the principal’s responsibility to train, create structures, and monitor data use by teachers for student improvement. Though full integration of data in every aspect of classroom instruction seems an intimidating goal, as illustrated here there are many simple steps that once taken can have significant results.

The data revolution at heart is a student-centered revolution, providing tools to help all students in a more individualized way than ever before. With leadership, engagement, and management, principals can live out their role as academic leaders through data-driven instruction.

“In God we trust.
All others must
bring data.”

– W. Edwards Deming



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