



Delivering Effective Accountability: Anatomy of the Process

White Paper

For

TrueNorthLogic

Presented By

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Executive Summary

Accountability is a complex combination of processes, information systems, and organizational competence.

Accountability is a key force driving improvement efforts in schools, districts, and state education agencies. Although “accountability” is often used to refer to test results, it is actually a complex combination of five core processes, information systems, and organizational competence to create instructional improvement. The five core processes are —

- Teaching to standards
- Assessment aligned with standards
- Data collection and management
- Data analysis
- Teacher certification

The Arizona Department of Education’s partnership with ASSET (Arizona School Services through Education Technology) exemplifies how a state agency has worked to become accountable and to help districts and schools become accountable as well. Robust and easy-to-use technology has shaped a highly individualized statewide professional development program, which, in turn, has improved the competence of Arizona teachers in the core process of teaching to standards.

In accountable organizations, the three components of accountability — core processes, information systems, and organizational competence — come together in a mutually supportive way that leads to improved effectiveness and efficiency.

The core processes constitute the central focus of an accountable organization.

- ◇ **Teaching to standards** means students are more likely to gain important knowledge and skills.
- ◇ **Assessments aligned with standards** include both summative and formative assessments.
- ◇ **Data collection and management** support required reporting and other functions.
- ◇ **Data analysis** helps to inform decision making.
- ◇ **Teacher certification** includes not only basic competency measures but also provides for ongoing professional development.

The best information systems combine open-architecture infrastructures and easy-to-use applications.

Information systems support the core processes through technology infrastructures and technology applications. The best infrastructures allow the sharing of data across systems, so that users in various departments can work together seamlessly, with consistent data. Infrastructures based on the concept of “open architecture” are cost-effective because they accommodate devices and programs from various manufacturers. The

best applications increase organizational efficiency and effectiveness because they're easy to use and they provide meaningful data that can inform decision making through thoughtful analysis.

Organizational competence is a necessary component for effective accountability.

Organizational competence in use of technology varies considerably from one organization to another. At the lower end of the spectrum are *transactional* users, who enter and retrieve data in a series of transactions. At the higher end of the spectrum are *informed* users, who use data for analysis, as the basis for informed decision making. For effective accountability to occur, organizations have to move up the four levels from transactional to informed users.

TrueNorthLogic delivers technology solutions that address the challenges of educational accountability.

Within the complicated context of accountability, TrueNorthLogic delivers technology solutions that help education organizations become more efficient and more effective. It has more than one million licensed users in 10 states, and a 94 percent client-retention rate. The company is unique in providing a three-pronged approach to helping educators improve their accountability:

- It provides an infrastructure that integrates disparate systems and enables sharing of data.
- It provides easy-to-use applications that enable more efficient management of data and processes.
- It provides consulting services that build organizational competency.

The TrueNorthLogic infrastructure uses a cost-effective "open architecture" platform. Clients can leverage their existing products for maximum efficiency.

TrueNorthLogic's applications are organized into three suites of management tools for teacher development, student development, and administrator support. They can be used as standalone products or in combination.

TrueNorthLogic's consulting services are based on the concept of client as partner. Ongoing support for project management improves the likelihood of overall success.

TrueNorthLogic addresses the business side of accountability as well as the academic side.

In addition to providing clients with a solution that addresses the academic side of accountability, TrueNorthLogic also helps clients deliver accountability on the business side. For example, with improved data management processes related to professional development, administrators can determine which training programs actually translate into improved teaching and learning in the classroom. Those that do not

lead to improved results can be eliminated. Better data management thus leads to better return on investment.

1.0 Defining the Delivery of Accountability

Accountability is the key educational driver of our time in schools, districts, and states. The term is usually used to refer to the results of testing. However, effective accountability is much more complicated. In reality, effective accountability is a complex combination of core processes that are supported by information systems and affected by the organizational competence that is necessary for continuously improving teaching and learning. The purpose of this white paper is to address the complexities of these elements and to explain how they interrelate.

Demands for accountability give educators no choice: they simply must find ways to become more effective — and that means measurably improving the effectiveness of the processes they engage in. In the simplest sense, accountability involves five core educational processes:

- Teaching to standards
- Assessment aligned with standards
- Data collection and management
- Data analysis
- Teacher certification

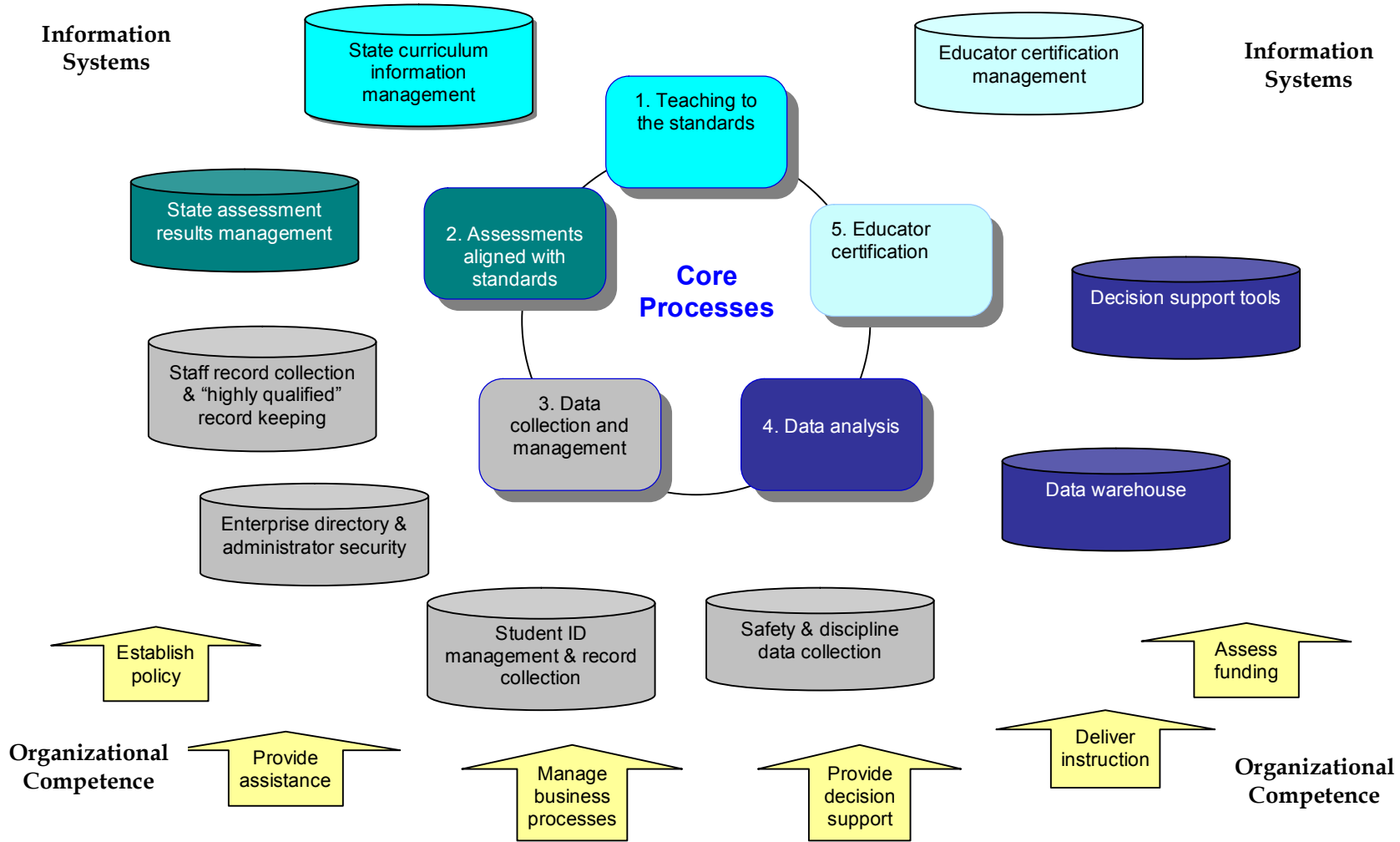
Each process is associated with information systems, such as testing databases that are linked to standards and data warehouses that support data analysis. In addition, accountability depends on the knowledge and competence of the people in the organization to implement it effectively.

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The core processes are more likely to be performed well if the related information systems provide the necessary support and if the organization has the necessary level of competence. With these elements in place, a school, a district, or a state agency is far more likely to meet stakeholders' expectations for accountability.

Accountability comprises five core educational processes, associated information systems, and organizational competence.

Accountability requires that educators improve the processes they engage in.



1.1 **Arizona's ASSET Project**

The Arizona Asset Project is an example of how changes in processes, technology, and organizational competence have improved teaching.

The Arizona Department of Education is an example of a state agency that has worked hard to build an accountable organization and to provide the resources for the state's districts and schools to become more accountable as well. Looking at one of the core processes of accountability — teaching to standards — the state realized the importance of having teachers who are well trained professionals, who engage in continual learning throughout their careers, and who receive ongoing support with resources that reflect best practices. In other words, Arizona recognized the need to focus on organizational competence. The challenge was how to create a statewide system that could develop a highly skilled teaching force so that “teaching to standards” was every teacher's way of doing business.

To help meet this challenge, the department partnered with several organizations, including Arizona School Services through Education Technology (ASSET), located at Arizona State University. ASSET helped the state department develop a program that includes online and face-to-face professional development opportunities, a streaming video library, and access to Web-based resources and lesson plans.

The underlying technology infrastructure that supports the state's professional development program is the ASSET Education Portal. The portal delivers more effective professional development, unified management and monitoring systems, and a single point of access to all ASSET services, partners, and third-party systems. The portal also makes it possible for teachers and administrators in rural desert communities to have the same access as those in large urban areas such as Phoenix.

With the various applications available through the portal, professional development no longer consists of one-size-fits-all workshops whose effectiveness is judged according to the number of people who show up and put in the required time. Instead, professional development can be custom-designed to fit the needs of an individual district, school, or teacher. For example, districts and schools can determine what resources they need to provide to ensure that their teachers meet the state's standards for the “highly qualified” designation. They can create assessments and surveys that gauge teacher knowledge and then use the results to deliver a personalized list of resources to help teachers meet their individual professional development goals. Teachers can register online for various classes and workshops, and click on links that lead them to a variety of resources for the classroom, including teaching tools and lesson plans. Administrators can gather and analyze data and use it to assess the effectiveness of professional development in terms of its actual

impact on student learning. Applications that assist with mandated reporting are another resource that administrators can tap into.

According to ASSET director Debra Lorenzen, Arizona's education administrators now base their professional development decisions on meaningful data rather than on teachers' personal preferences or education fads. "All decisions about instruction and professional development need to be related to helping students achieve standards . . . as opposed to guessing," Lorenzen notes.

The Arizona experience illustrates how organizational competence (in this case, of teachers and administrators) can be improved through a robust information system (consisting of a flexible technology infrastructure and easy-to-use applications). The result is measurable improvement in the core process of teaching to standards, making Arizona and its districts better equipped to meet the challenges of accountability.

With core processes, information systems, and organizational competence up to par, the organization can better fulfill its mission of improved student achievement.

2.0 Understanding the Components of Accountability

In the most successful education organizations, the three components of accountability — core processes, information systems, and organizational competence — come together to create an efficient, effective operation. When all three components work well, the school or district can better fulfill its ultimate mission: improved student achievement.

2.1 Core Processes

2.1.1 Teaching to standards means that classroom instruction is aligned with state and federal standards so that students are more likely to actually learn what the community deems to be important. Teaching to standards is essential to accountability.

2.1.2 Assessment aligned with standards ensures that teaching is having the desired results in terms of student learning. In the most accountable organizations, assessment is both summative (as in high-stakes state tests) and formative (that is, ongoing and used to inform day-to-day decisions about instruction).

2.1.3 Data collection and management provide the organization with the information it needs in order to fulfill such functions as preparing reports for district, state, and federal agencies. Virtually every education organization collects data, but they vary in how well they manage it. The

An accountable organization is effective in the core processes of teaching and assessing to standards; data collection, management, and analysis; and teacher certification.

most accountable organizations have systems in place for efficient collection and management of data. According to a survey conducted as part of the 2005 Technology Counts report published by *Education Week*, 16 states listed “data management” as one of their top two priorities for technology spending in 2004–2005. *Ed Week* reports that the motivation for this shift is two-fold. First, educators are hoping that improved data management can provide the information that teachers and others need in order to develop strategies that will lead to improved learning in the classroom. The second motivator is more straightforward: the extensive reporting required by No Child Left Behind. Fifteen states said that NCLB had influenced their decisions to invest in bigger and better data systems

2.1.4 Data analysis takes an organization to a higher level of effectiveness. Collected data becomes the basis for informed decision making, moving the organization further along on the road to accountability.

2.1.5 Teacher certification ensures that an organization has in place the human resources it needs to perform the basic function of classroom teaching. In the most accountable organizations, it includes a recognition of the importance of going beyond minimum competency and providing the resources necessary for teachers to continually grow in their knowledge and skills, thereby increasing the likelihood that the school or district will succeed in the mission of improved student achievement.

2.2 Information Systems

Information systems can be thought of in terms of two elements: technology infrastructure and applications. Infrastructures and applications that serve the best interests of accountability have certain notable characteristics.

The best technology infrastructure is robust, dependable, cost-effective, and flexible — that is, it can support a variety of users and applications and it enables the sharing of data across disparate systems. With integration of data across systems, the organization operates more efficiently, and data is consistent from one department to another. For example, in a district with a sound technology infrastructure, HR can quickly access the data needed for keeping records related to certification and “highly qualified” teachers; teachers can tap into information that helps them fill in the gaps in their professional training; principals and other administrators can gather statistics that inform them as to whether their school or district is on target to meet government requirements; a business manager can access data to see how the budget is impacted as teachers advance along the salary scale based on their professional

Information systems combine infrastructure and applications.

The best infrastructure is robust, dependable, cost-effective, and flexible, taking advantage of the benefits of “open architecture.”

credentials. An integrated system and consistent data contribute to a smoothly operating organization that spends its time and resources wisely.

A concept called “open architecture” is key to creating a cost-effective, easy-to-use technology infrastructure. Unlike “proprietary architecture,” open architecture allows a technology system to connect with devices and programs that may be manufactured by a variety of companies. It can take advantage of off-the-shelf components, as long as they conform to certain standards. This means that schools or districts don’t need to throw out the products they’ve already invested in. They can use their existing products and connect them so that data can be shared across an integrated, comprehensive system.

The best education applications are those that increase the organization’s efficiency and effectiveness — and that are actually used by teachers, administrators, and others involved in the education enterprise. They streamline and simplify the core processes of education so that the organization can focus more of its time and energy on the central mission: improved student achievement. Applications that are cumbersome and difficult to navigate add little value to the organization. More often than not, they create the opposite effect: exasperated teachers and administrators who ignore the available technology or use it only when mandated to do so. Not only do such applications fail to improve an organization’s efficiency and effectiveness. In fact, they may add to a district’s headaches in terms of employee morale and operational efficiency.

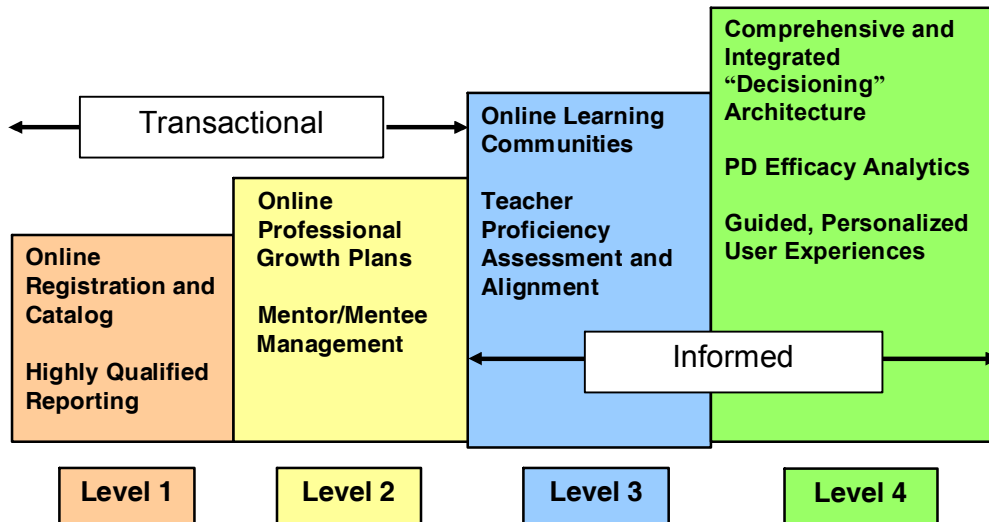
In addition to improving organizational efficiency and effectiveness, the best applications also provide meaningful data that can inform decision making and support the organization’s mission and goals. They go beyond the “housekeeping” functions of education, such as recording attendance and keeping track of test scores. They include tools for sophisticated analysis and comparison over time, providing the information needed for strategic planning and thoughtful implementation of programs.

2.3 Organizational Competence

Some might argue that organizational competence is the most important and the most complicated component in the accountability equation. Education organizations vary significantly in their level of maturity as users of technology; some shun it, while others embrace it. Relatively few use it to its full potential. Using professional development as an example, users’ levels of maturity can be portrayed as a continuum:

The best applications are easy to use and provide meaningful data for improving organizational efficiency and effectiveness.

Organizations cover a wide spectrum in their level of competence as users of technology.



2.3.1 Level 1 organizations use technology for relatively simple tasks. Teachers, for example, may search an online catalog and register for classes and workshops online. Administrators may use an application to gather basic data for mandatory reports related to “highly qualified” teachers.

2.3.2 Level 2 organizations have moved beyond the basics. In addition to the Level 1 capabilities, teachers may have access to applications that help them prepare a professional growth plan and keep track of their progress over time. Other available applications may help teachers and administrators manage an assortment of administrative tasks, such as scheduling for mentoring programs.

2.3.3 Level 3 organizations show greater sophistication in their use of technology. Teachers and administrators may participate in online learning communities, sharing lesson plans, readings, and materials within or across grade levels. Teacher assessment tools may enable administrators to gauge teachers’ growth in professional proficiency and ensure that professional development is aligned with state and district standards and goals for student achievement.

2.3.4 Level 4 organizations use comprehensive, integrated technology not only to gather and manage data, but also to support their decision making. For example, going far beyond simply finding out which teachers have taken certain workshops, an administrator can gather more sophisticated data that relates to the extent to which the training has

actually changed teacher behavior in the classroom and impacted individual student learning.

In Levels 1 and 2, organizations are using technology largely for what might be called “transactional” purposes. They’re at the early stages of building a more efficient organization by entering and retrieving data in a series of straightforward transactions. Level 3 and 4 organizations are using technology for analysis — to become more “informed” about their effectiveness and to become better decision makers as a result.

Integration of Core Processes, Information Systems, and Organizational Competence

Each of the three components — core processes, information systems, and organizational competence — is important. But when the three are highly developed and mutually supportive, an education organization is on sound footing in its progression toward becoming accountable to its constituents.

3.0 True North Logic as a Leader in the Delivery of Accountability

TrueNorthLogic has positioned itself to be a key player in the delivery of technology solutions aimed at education accountability. Its solutions include the open architecture, easy-to-use applications, and support for organizational competence that educators need in order to become more efficient, more effective — and more accountable.

3.1 TrueNorthLogic’s credibility as a leading technology provider is supported by the fact that it has **more than one million licensed users in 10 states, and a 94 percent client-retention rate**. Its clients include the following:

- Arizona Department of Education
- California Department of Education
- Clarksville–Montgomery County School System (TN)
- Corporation for Education Technology (IN)
- Hawaii Department of Education
- Montgomery County (MD) Public Schools
- Odyssey Charter School (NV)
- Utah State Office of Education

3.2 Many education technology companies tout their “solutions,” but TrueNorthLogic is unique in its three-pronged approach:

Lower-level technology users enter and retrieve data in a series of transactions; more sophisticated users analyze data and use it for informed decision making.

True North Logic combines the benefits of open architecture, easy-to-use applications, and consulting services to build user competence.

- It provides an **infrastructure** that integrates disparate technology systems so that data and applications can be easily shared across the organization.
- It provides **applications** that enable more efficient management of data and processes.
- It provides ongoing **consulting** services that build the competency of the people working with the technology.

3.2.1 Infrastructure

TrueNorthLogic uses the “open architecture” described earlier to bring together disparate systems and products. Clients can keep their existing technology and leverage it for maximum effectiveness and efficiency.

3.2.2 Applications

TrueNorthLogic’s applications are organized into three suites of management tools:

- **TrueAchieve Teacher Development System**, to manage teacher professional development, including planning tools for a teacher’s entire professional career, and tracking and auditing tools to ensure that teachers are qualified
- **TrueLife Student Development System**, to manage student learning experiences, including tools for individualized learning, portfolio management, and communication between students, teachers, and parents
- **TrueGuide Administrator Support System**, to manage administrator tasks, including customized tools for analyzing student assessment results, managing grants, preparing state and federal reports, and measuring the outcomes of professional development

The applications can be used as standalone products or as a comprehensive package. All of them are designed to function as streamlined, easy-to-use tools for improving the day-to-day processes that educators engage in.

3.2.3 Consulting Services to Build a Sophisticated Education Organization

TrueNorthLogic builds its consulting services around a simple concept: client as partner. This approach elevates the client above the level of being a purchaser of a product and instead makes the client a recipient of ongoing assistance that ensures that the product yields the desired results.

TrueNorthLogic's service orientation begins with its first contact with a prospective client. TrueNorthLogic representatives ask questions about the district's needs, concerns, and issues. They listen. Once a partnership is established, TrueNorthLogic representatives work with major stakeholder groups — technical staff, HR staff, administrators, teachers, and others — to develop an implementation process that honors the existing culture while helping the organization achieve better results. TrueNorthLogic provides ongoing support for project management as long as a district or department requires it.

As mentioned earlier, educators vary considerably in how sophisticated they are in their use of technology. Regardless of where a client organization is on the continuum, TrueNorthLogic helps it move to a higher level. Those who are at the lower levels may make the most gains over the course of their relationship with TrueNorthLogic, but even those who begin at the higher levels see their overall effectiveness and efficiency improve.

3.3 A Look at the Business Side of Education Accountability

In addition to improving results on the academic side of the organization, TrueNorthLogic solutions also help educators address concerns on the business side. More and more educators understand the importance of being able to justify their expenditures in terms of return on investment (ROI). Again, the example of professional development provides a compelling illustration.

A recent report from the Center for the Study of Teaching and Policy indicates that school districts spend an estimated 3 percent of their total expenditures on professional development. The average amount spent per pupil is more than \$240, or more than \$1.2 million for a district of 5,000 students. But most districts don't know what they're getting for their investment because they don't track or manage teachers' professional development activities using anything other than superficial methods. Post-event surveys may elicit information on how many teachers attended a workshop and whether they "liked" the presenter. But worthwhile data on how professional development is — or is not — affecting student achievement is sorely lacking.

As a result of this haphazard approach, professional development often gets shortchanged, despite a growing awareness that an effective teacher is one of the most important predictors of student success. Professional development is an easy mark for budget-cutters because they don't see any return on investment.

Return on investment is of increasing importance as a measure of accountability.

Clearly, districts need not only to rethink the structure and content of their professional development, but also to be able to measure its effectiveness and show their various constituencies that an investment in professional development will pay off in better instruction — and better student achievement.

With the TrueAchieve applications and TrueNorthLogic's ongoing consulting services, districts can gain a much greater understanding of professional development's value. Programs that don't have a positive impact on student learning can be jettisoned in favor of others that make a real difference, and dollars spent on professional development can translate into higher scores on high-stakes tests.

3.4 Delivering on Accountability

With its three-pronged approach — a cost-effective infrastructure that supports system integration, data-management applications that improve the efficiency of core processes, and consulting services that move an organization along a continuum of technology expertise and overall competence — TrueNorthLogic has established itself as a leader in helping education organizations build their capacity to fulfill their mission and become more accountable to their constituents. Everyone in the education community benefits — teachers, administrators, staff, and, most important, students. And the larger community benefits as well, as accountability becomes an accepted way of doing business.