

# An Inquiry-Based Approach: Using Data for School Supervision, Accountability and Continuous Improvement

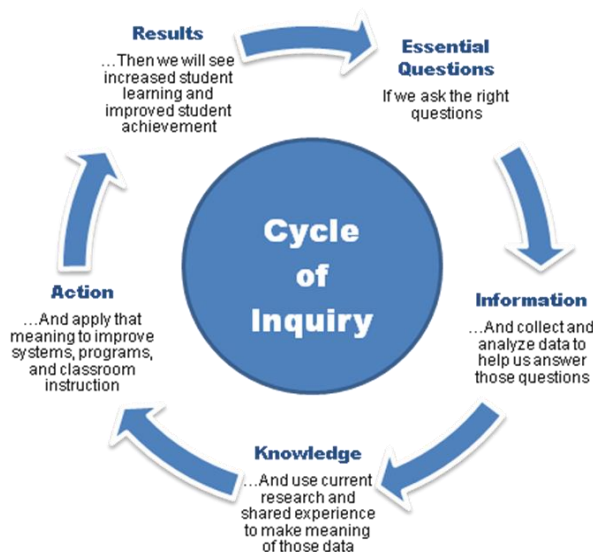
By: David Ronka  
Public Consulting Group

# Any Inquiry Based Approach

Using Data for School Supervision, Accountability, and Continuous Improvement

Schools rely on “random acts of improvement” (Bernhardt 2006, p. 30) when educators do not set clear targets for improvement and then use data to track progress against measurable indicators to reach those targets. Data can be used to formulate appropriate and effective education policy and to measure the effectiveness of programs and instructional interventions. Data can also be used to measure individual student progress, guide the development of curriculum, determine appropriate allocation of resources, and report progress to the community. But despite the leverage that can be gained by using data effectively, many schools still struggle with data-driven decision making (Mason, 2002; Ingram, Louis, & Schroeder, 2004; Boudett & Steele, 2007; Stid, O’Neill, & Colby, 2009).

The Pedagogical Supervision Act provides a framework for the type of data schools can and should analyze on a regular basis, both in the context of self-conducted internal evaluations and in the context of data gathered through external evaluations. Public Consulting Group (PCG) has developed the Data-Driven Inquiry and Action Cycle theory of action to help guide educators through the process of inquiry and action, from formulating essential questions to analyzing data, to taking action and measuring impact. Each of the steps in the cycle is described below.



## Essential Questions

Questions are used throughout the cycle of inquiry. There are three types of questions: discovery, diagnosis, and action. At the beginning of the process it’s important to formulate researchable questions of discovery that reflect high-priority educational issues. Discovery questions begin with phrases like “How did our students do in...?”, “To what extent do our teachers...?”, and “To what extent do parents...?” During this phase of inquiry, it is important to ask questions that can be informed through the collection of data. The Pedagogical Supervision Act’s 17 requirements provide a basis upon which essential questions can be formulated in key areas such as processes, environment, management, and effects. Perhaps the most important factor, however, is that question formulation happens collaboratively within the school, with key stakeholders taking part in the process to ensure all interests are represented.

## Information

Once questions have been articulated, the next step is to collect information to help answer them. There are multiple sources from which to collect data, including: attitudes and perceptions (through surveys, interviews, and focus groups); the occurrence of certain activities (through walkthroughs and structured observation); the presence of key artifacts (through collection of materials and work samples); and student outcomes (through assessments, quizzes, attendance, and behavior data). Data gathered through evaluations form a good starting point for the collaborative analysis of a school’s current state. The better the data (accurate, relevant, complete, and up-to-date) the better the conclusions drawn from the data will be, and combining multiple data sources always provides a more complete picture.

## Knowledge

The next step in the process forms the bridge between data analysis and informed action. In this step, educators engage in a collaborative process of analyzing the collected data, consulting the research literature and sharing best practices to identify both a problem that needs to be addressed and the root cause behind that problem. A clear problem statement (which can be articulated as the current state) and an understanding of what is causing the problem form the basis for moving on to the next step in the process. Diagnosis questions can help identify the root cause during this step. These are typically “why” questions.

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## Action

Without action, collecting and analyzing data is a meaningless activity. However, impulsive action can be even more destructive. A carefully thought-out action plan connects the problem statement (current state) with a desired future state through an improvement strategy that addresses the root cause identified in the previous step. The improvement strategy can be identified by asking action questions, which typically start with “How do we...?” The most effective action plans contain discreet, specific steps to carry out the improvement strategy, including owners for each step, deadlines, and an identification of resources needed. However, an action plan is not complete without an articulation of specific benchmarks that can be monitored to ensure that action is actually being taken. This is clearly defined in the monitoring plan, which also identifies who is responsible for monitoring progress against the action plan and how that progress will be reported to key stakeholders.

## Results

Measuring results as they relate to inputs is a critical step in evaluating the impact of the action plan. The improvement strategy articulated in the action plan should have a clear connection to measurable results; e.g. “If we take this action, we should see this result in our school.” Data should be collected to determine the extent of impact (this is often the same type of data collected in the information step), and once analyzed should feed back into a new round of discovery questions that either dig deeper into the initial problem or redirect to a new problem.

Implementing a structured improvement process such as the cycle of inquiry will only be successful when educators share a commitment to collaboration, self-reflection, and communication. It is also essential for all stakeholders to share an understanding that the focus of school improvement is the growth of its students. Therefore, every action taken in the school should have some connection to improving the student outcomes we care most about. Actions taken in the classroom have the greatest chance of directly impacting student outcomes such as knowledge, skills, and social norms. The further the action is from the classroom, the more indirect the impact on student learning. When engaging in the cycle of inquiry it is critical to always keep the end in mind and evaluate the cost of taking action (in terms of time and resources) against the impact on student outcomes. A disciplined and regular process of asking questions, collecting data, and taking targeted action will make school improvement a deliberate and thoughtful process rather than being dependent upon “random acts of improvement.”

## About the author

David Ronka designs and delivers professional development for school leaders helping them use data to improve student outcomes, implements educational data management systems for school districts, and helps schools design informative and useful data reports. Mr. Ronka earned his Master of Education from Harvard and is a Teaching Fellow for Harvard’s Data Wise summer institute, working with educators around the world to help them make better use of their data.

## Additional information

contact in English: David Ronka [dronka@pcgus.com](mailto:dronka@pcgus.com)

contact in Polish: Małgorzata Marciniak [mmarciniak@pcgeu.com](mailto:mmarciniak@pcgeu.com)

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