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Generate Questions to Study Student Needs

a. Sample Questions to Ask of Data

This activity is designed to help participants begin to identify and form important questions regarding student achievement. The emphasis is on forming meaningful and measurable questions. The sample questions are provided as a starting place for conversations. Aligned with the sample questions are suggested places to find the information and suggested methods to employ to answer each question. Participants should begin by reading the sample questions and then generate their own questions regarding the area of student achievement that is of interest.

The QIC-Decide tool from Data Driven Leadership (DDL) guides a process to assist educators in forming questions and using data to make decisions. QIC-Decide may assist districts in using data to address many of the questions suggested in these materials. Tool 2(data)3 has suggestions for where to find answers to these questions.

District

- How does our student performance in reading and math compare with state and national achievement norms?
- Are our mean percentile math and reading achievement scores consistent at the elementary, middle school and high school levels?
- How does the achievement of our various subgroups (e.g., Special Education, English Language Learners, Low Socioeconomic Status, ethnic minorities, etc.) compare with our district averages in reading and math? Are we serving all students equally?
- How many schools do we have "in need of assistance" or in danger of being labeled "in need of assistance"?
- How do our reading and math scores correlate with attendance?
- How do our reading and math scores correlate with discipline referrals?
- How many of our students are proficient in reading? Math?
- How many of our students are "marginally" proficient (e.g., scoring between the 41st and 50th percentile in reading and math on the ITBS/ITED?)

School

[Schools will ask many of the same questions of their school data that the district asks about all their students. In addition, schools have other questions that are specific to their sites.]

- What areas of reading/math are most difficult for our students (e.g., item analyses of ITBS/ITED data will reveal scores for sub-categories of reading such as "decoding", "using context clues", and "determining main ideas")? What are the strongest skill areas for our students in reading and math? What are the weakest areas?
- Do we have overlap among our sub-groups (e.g., how many of our special education students receive free/reduced lunch or how many of our low SES students belong to ethnic minorities)?
- As a sub-group, our Special Education students scored lower on the reading portion of the ITBS than the rest of our student population. When we look at the distribution of reading scores for students in special education, are there clusters of high and low achievement by type of disability?
- What are the reading scores of students who have dropped out of school this year?
- What is the correlation of reading scores with students who have been referred to the office for discipline problems this year?
- How much independent reading do our students do? At school? At home?
- What supports for struggling students are present in our school, neighborhood, and community? Do we know how effective they are?
- Why are our students referred to the office? What are the most common forms of student misbehavior in our school?

Department/Grade Level(s)

- What specific comprehension tasks account for the 4th and 5th grade decline in overall comprehension scores on the ITBS?
- How many of the 9th grade students reading below the 40th percentile on ITED are earning D's or F's in English I?
- When we examine the item analysis data for math on the ITBS/ITED, are the weaknesses discovered in problem solving consistent across all the grades?
- How many of our students failed Algebra I? How many failed English I?

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b. The QIC Decide Tool

Iowa Area Education Agencies describe QIC-Decide protocol on the website, <http://www.iowaaea.org/evaluation/b.10-qic-decideprotocol.html>.

The Iowa Professional Development Model and QIC-Decide

The implementation of the Iowa Professional Development Model requires careful use of data throughout the process. The design of the model incorporates an action research process that includes multiple steps where data are collected, organized and analyzed to make decisions about professional development and school improvement. The QIC-Decide tool guides a process to assist educators in forming questions and using data to make decisions. QIC-Decide may be used to facilitate the action research approach that serves as the framework for the Iowa Professional Development Model. The four steps in QIC-Decide are:

- Question
- Information
- Collect
- Decide

Administrators and other practitioners trained in the QIC-Decide process may determine that QIC-Decide expedites their work in implementing the action research cycle outlined in the Iowa Professional Development Model. Examples of questions that might arise in the various steps of the Iowa Professional Development Model are listed below. Many of these questions will generate additional questions that can be addressed using the QIC-Decide process.

1. What does the CSIP data tell us about how all students in our district/building are performing in reading? ... math? ...science? How is each subgroup in our district performing in reading? ... math? ...science? What implications do these results have for instructional practice? For staff development? What additional student performance data do we need to determine a focus for professional development?
2. What focus area in curriculum and instruction has the greatest urgency for our students and their families?
3. Which scientifically research-based strategy is likely to close achievement gaps identified through the CSIP process? Is this strategy replicable in our district/building?
4. How will we know when implementation of the planned strategy has occurred? Is each teacher in our district/building implementing the strategy with fidelity? How many children in our district have experienced accurate application of the strategy in the classroom on a consistent basis? How will the district address schools and classes where implementation is lagging?
5. Is adequate time allotted for staff development to enable teachers to plan and discuss lessons?
6. How frequently are students experiencing the content of staff development?
7. What do the trend lines in student performance data suggest about the effectiveness of the staff development initiative?

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QIC-DECIDE Standards and Benchmarks

Question

Standard 1: Identifies and forms important questions that define a specific problem.

Benchmarks:

- 1.1 Identify questions that will lead to improved programs, services, and results for children and youth.
- 1.2 Forms assessment questions in a way that they can be answered with data.

Information

Standard 2: Identifies the information needed to answer the question.

Benchmarks:

- 2.1 Determine the type and quality of the information needed based on the nature of the decision.
- 2.2 Identify the quantity of information based on the nature of the decision.

Collection

Standard 3: Collects and effectively organizes information.

Benchmarks:

- 3.1 Use efficient and effective data gathering strategies
- 3.2 Organize and analyze the information appropriately.

Decide

Standard 4: Uses information to make important educational decisions.

Benchmarks:

- 4.1 Appropriately interprets the information to draw conclusions that are meaningful to educational practice.
- 4.2 Uses the collected data to document and justify the decision, taking into account the possible limitations of the data.

The following page shows a brief example of one school's application of the QIC-Decide tool.

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<p>Question – Identifies and forms important questions that can be answered with data that define a specific problem and that lead to improved programs, services, and student achievement</p>
<p>Area: grade six reading Who to involve: classroom teachers, Title teacher, special education teachers, curriculum director, principal Expectations: all students at the proficiency level Question: How are our sixth graders achieving in reading?</p>
<p>Information – Identifies information necessary to answer the question by determining the type, quality, and quantity of information</p>
<p>Consequences: high Amount/type of data needed: one source of data that is technically adequate, highly objective, and direct in measure; at least one source of supporting data that is as technically adequate, highly objective, and direct in measure as possible Information to collect: 3RD -5th grade ITBS and multiple measure scores in reading, attendance data, when started school, intervention data (Special Ed, Title, etc.), tardy, ELL, SES</p>
<p>Collect – Collects and effectively organizes information using efficient data collection strategies; analyzes information appropriately</p>
<p>Plan: yes Organize: raw data tables of non proficient students Summarize: number of students by subgroups Display: line graphs indicating four years of collected data</p>
<p>Decide – Directly answers the question using collected information, with appropriate interpretation of information in order to make documented and justified conclusions</p>
<p>Interpret: 21not 41NPR (16%), 10/21 SE (48%), 14/21 Boys (67%), 13/21 FR (62%), 0/21 are ELL. 8/21 Never Proficient (38%) Decision statement and Justification: How are our sixth graders achieving in reading? The decision is that 21 of 132 sixth grade students are not reading at the proficient level. We are confident in this decision because of the amount and types of data used to make the decision Communication: communication to the following groups: teaching staff, administrative team, school board, parents Next steps: further analysis of multiple data sources, for those who have a skill deficit, determine teaching strategies to address deficiencies.</p>

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Question
Area: Who to involve: Expectations: Question to answer:
Information
Consequences are: Amount/type of data needed: Information we will collect:
Collect
Plan: Organize: Summarize: Display:
Decide
Interpret: Decision statement Justification: Communication: Next steps:

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c. What We Need to Know About Our Students

As the team members generate questions to address the topic, “What we need to know about our students,” they record each question on the form below. After the data have been collected, analyzed, and interpreted, team members record their answers.

QUESTION NUMBER	QUESTION	ANSWER