

2005 MAP Data-Analysis Workshop

Agenda

- I. Welcome and Introductions
- II. Objectives and Guiding Questions
- III. Data Analysis
 - A. Achievement Level Report
 - B. Content Standards Report
 - C. Item Benchmark Description Report
- IV. Action Plan
- V. Wrap Up/Questions and Answers

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Objectives and Guiding Questions

- 1) Recognize the value of analyzing data and using data to support decision-making processes.
- 2) Analyze trend data by subject and by content standard, and begin to investigate trends by item type.
 - A) What trends and patterns do you see in the achievement-level data? The content-standard data? Item-level data?
 - B) Are there multiple patterns? If so, what do they tell you?
 - C) Do you see a consistent or inconsistent pattern when you compare state data with local data?
- 3) Develop hypotheses about the factors impacting student performance.
 - A) What are the most likely factors causing these patterns?
 - B) How does your curriculum relate to these patterns?
 - C) How does classroom instruction relate to these patterns?
- 4) Consider ways to confirm or reject each hypothesis.
 - A) Are your curricular goals/objectives aligned to the Show-Me Standards?
 - B) Is classroom instruction aligned to the Show-Me Standards?
 - C) What other factors are influencing your data?
- 5) Relate the GLEs to trend data, which should occur at the local level after the workshop. How do the GLEs shed light on your data?
- 6) Use achievement-level descriptors to judge the effectiveness of curriculum and instruction, which should occur at the local level after the workshop.

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Guidelines for Analyzing MAP Data

1. MAP is a grade-span test, so the results should be reviewed and analyzed with all of the appropriate grade-level or grade-span teachers.
2. Multiple years' data must be reviewed to ensure the most meaningful analysis. Using one year's data will essentially mean you are trying to improve on last year's test...
3. Emphasis should be placed on identified strengths and not solely on areas of concern, in order to maintain performance in the areas of strength.
4. Teachers will need time and encouragement to consider the implications for change in curriculum, instruction, and classroom assessment.
5. Look for trends.

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MAP Data Review

1. Examine the Achievement Level Reports for all subjects and for all years available to see how students performed and to determine **trends indicating general areas of strength and concern**. Pay close attention to the number and proportion of students in each level.
2. Use the Content Standards Report for all years available. Within each subject, identify the area of greatest strength over the multiple years. Discuss what is being done with curriculum, instruction, and assessment that might account for the success in that area, using the following (or similar) process.
 - Identify an area or areas in which the students have been successful.
 - If students have done consistently well, try to determine why.
 - What amount of time is usually spent on that area?
 - Could the time of year make a difference?
 - What kinds of resources are used?
 - What kinds of instruction are used: Hands-on activities? Research? Lecture? Etc.
 - Does the area of success rely on natural student interest?
 - To what extent is application of the content an integral component of the unit?
 - Has the teacher required students to use higher-order thinking skills in the unit?
 - Have teachers made explicit connections between the content and skills of this unit and others taught at this or previous grade levels?
 - If there is an area in which performance is improving, try to determine why.
 - What have we done differently that might have caused improvement?
 - Did we increase the amount of time spent on this area at the expense of other areas, which then had lower scores?
 - To what extent did differences in the students contribute to differences in the scores?

MAP Data Review (continued)

- Consider "tracking" a group of students to compare their scores from previous tests. For example, compare how a class of eighth graders did on the MAP math test with how that same group of students did on their fourth-grade MAP math test. If gains were made (increase in the top two levels or decrease in the bottom two levels), try to determine why.
3. Use the Content Standards Report to select one area of **weakness** on which to **focus efforts toward improvement**.
 - There are many different ways to select a standard on which to focus.
 - Identify a standard that is consistently the lowest over time.
 - Identify a standard that has been consistently decreasing.
 - Identify a standard that has been either decreasing or holding steady, while the state results show steady improvement.
 - If two standards are equally low, select the standard that has the most "carry over" to other standards (for example, "Patterns" in mathematics).
 - Identify a standard that is very erratic in its results.

Note: The important thing is not the method you choose, but that teachers collaboratively select an area on which to **focus**.
 4. Use the Content Standard IBD reports to complete the "Data Analysis Chart" (Appendix A). **This step must be taken for all years for which data are available**. Identify the lowest items for the specific content standard you have decided to analyze. You may define "lowest" as items below 50%, or you may apply a different cut-point.
 5. Examine the collected data for general **trends** in . . .
 - question type (selected-response, constructed-response, performance event)
 - process standard,
 - content, and
 - levels of thinking skills.
 6. Articulate general **trends and conclusions**.

MAP Data Review (continued)

7. Compare, in a global way, the data **across the grade levels**.
 - Investigate how a sample of students has done over multiple years. Were there changes from 3rd/4th grade to 7th / 8th grade or from 7th /8th grade to 10th/11th grade? If so, why? If not, why not?
 - Examine other sources (e.g., other standardized test scores, classroom-assessment data) of longitudinal data for these students. What do these data suggest about student performance?

8. Compare the **process standards** for a **grade-level** group across subjects.
 - Are there trends?
 - Are the process standards identified as weak also weak in other subjects, or are they only weak when combined with a particular content? For example, if students are weak in Process Standards 1.8 and 3.5 in mathematics, are they also weak in those standards in communication arts and science?

9. Use "Questions to ask about..." (Appendix B) to **identify possible causes** for the trends and conclusions you have articulated.
 - Consult resources that will help shed light on the causes and also support improvement, including the MAP Achievement-Level Descriptors, the Communication Arts Show-Me Standards Assessment Interpretations, the Supplement to the Mathematics Framework, and MAP Released Items and Scoring Guides.

2005 MAP Data-Analysis Workshop

Using Data Analysis to Develop a Communication Arts Action Plan

1. Using "Action Plan" (Appendix C) to develop hypotheses about what caused the low performance you are trying to address.

Incorrectly identifying the causes for poor performance will result in wasted effort and no improvement.

2. Identify appropriate solutions.

After analyzing multiple years of data, one apparent weakness is that seventh-grade and eleventh-grade students are having difficulty drawing conclusions from fiction and non-fiction passages. Students need additional exposure and direct experience drawing conclusions from passages. Data reviewers determined that all content areas need improvement and will, therefore, be addressed in the effort to improve this standard.

3. Specify the actions needed. These actions should be very specific, including dates.

- September 15th - District communication arts teachers meet to develop a presentation for the October Professional Development Day.
- September 22nd - Presentation Development Committee meeting.
- September 29th - District communication arts teachers meet to review and finalize the presentation for the October Professional Development Day.
- October 8th - Professional Development Day - Communication arts teachers work with their colleagues to design questions and activities that will improve student learning in drawing conclusions in all content areas. Professional Development Plans focus on improving students' ability to draw conclusions.
- October 28th and 29th - Drawing Conclusions Days - In each building, all students demonstrate their ability to draw conclusions by participating in a performance event in each of their classes to establish a baseline of performance.
- November, December, and January - Teachers spend 20 minutes at department meetings discussing action plan results and developing new strategies to address the improvement goal.

- February 24th and 25th - Drawing Conclusions Days - In each building, all students demonstrate their ability to draw conclusions by participating in a performance event in each of their classes. Teachers score the performance events to judge improvement since October.

4. Plan for administrative follow-through.

The principal will support teachers in the Professional Development Plan implementation and will meet at specified times with the teachers according to the Professional Development Plan guidelines established by the district. The principal will use implementation of action plan as part of the teacher evaluation process.

An Action Plan without follow-through is a waste of time.

2005 MAP Data-Analysis Workshop

Using Data Analysis to Develop a Mathematics Action Plan

1. Using "Action Plan" (Appendix C) to develop hypotheses about what caused the low performance you are trying to address.

Incorrectly identifying the causes for poor performance will result in wasted effort and no improvement.

2. Identify appropriate solutions.

For example, students who have difficulty with "Geometric and Spatial Sense", especially with items requiring them to draw and measure, may need additional practice in these skills throughout the year.

3. Specify the actions needed. These actions should be very specific, including dates.

For the example above, an appropriate action plan would include making sure in September that students have appropriate tools (rulers, including metric rulers, compasses, protractors, etc.), receive explicit training in their use by the end of the first month of school, and then have two items on every test throughout the year that require them to draw and/or measure.

4. Plan for administrative follow-through.

For the example above, follow-through might include turning the action plan into a Professional Development Plan. Teachers would review student work to analyze results and modify the action plan as needed.

An Action Plan without follow-through is a waste of time.