



Five Basic Graphs for Results  
(Summative) Data  
Murphy School District AIMS Data



Five Basic Graphs

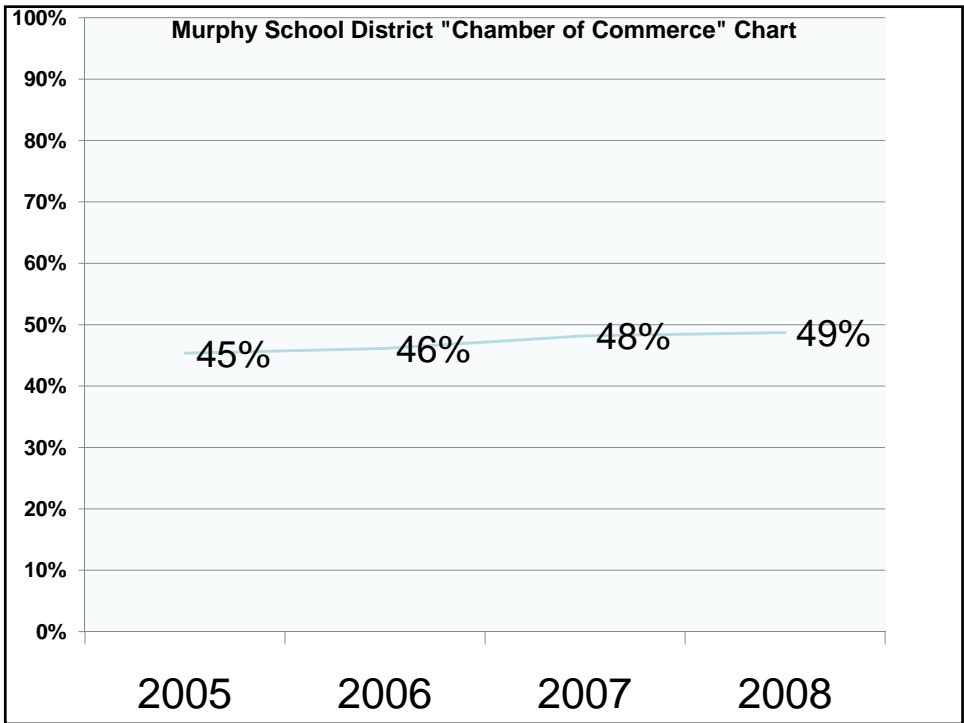
**Enumerative**  
“Chamber of Commerce”  
Radar Chart


**Analytical**  
Pareto Chart  
Correlation Chart  
Control Chart



### “Chamber of Commerce” Graph

This graph, which makes little sense to educators, is the percent of exams that students met or exceeded standards. It combines writing, reading and mathematics for all grade levels in the district.





## Radar Chart

The radar chart is for displaying data for multiple measures over several years. In Excel, the rows are the measures and the columns are the years.

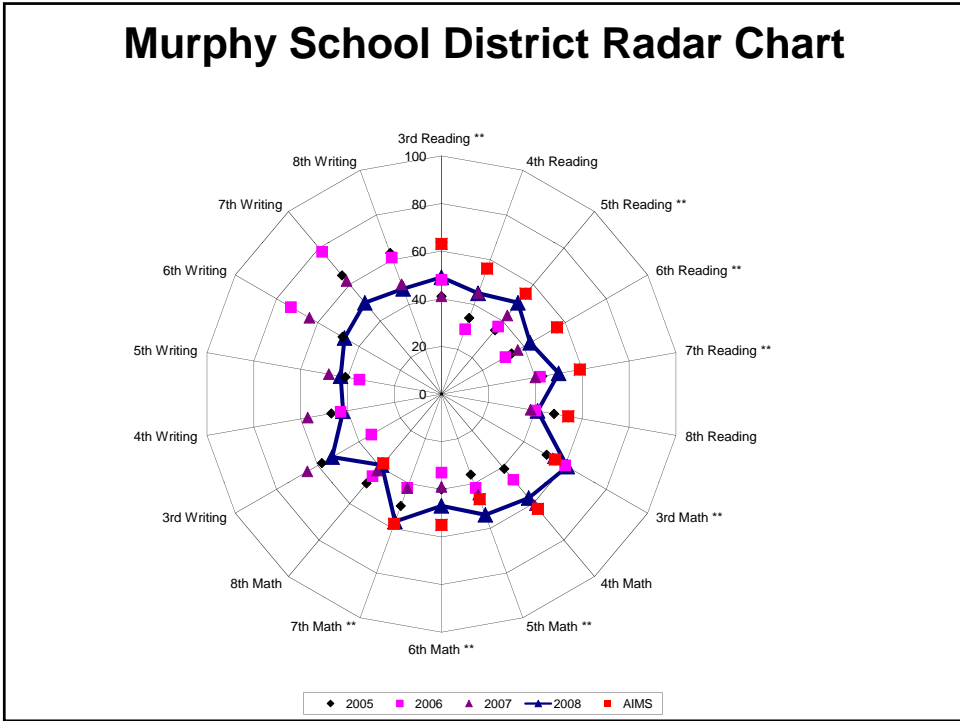
Michael Schmock of Cecil County, Maryland School District made three significant improvements to the radar chart.


1. Removed all lines except the most recent year.
2. Added a double asterisk for all-time-bests
3. Added Annual Measurable Objective (AMO)

Data comes from CTB Summary

## Setting Up Excel

	2005	2006	2007	2008
Reading 3				
Writing 3				
Math 3				
Reading 4				
Writing 4				
Math 4				
Reading 5				





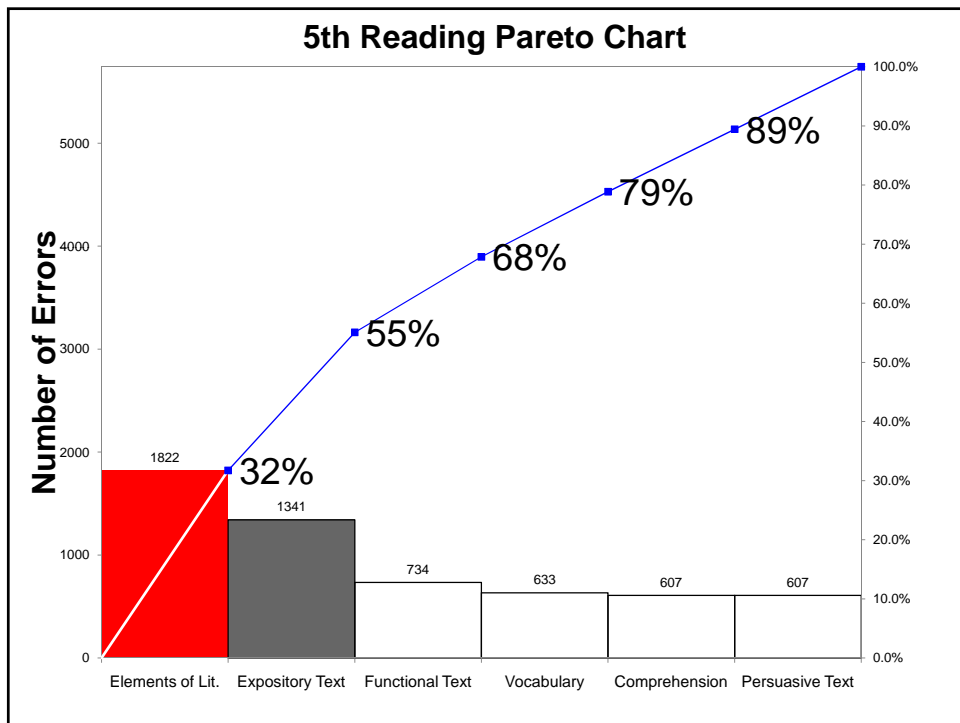
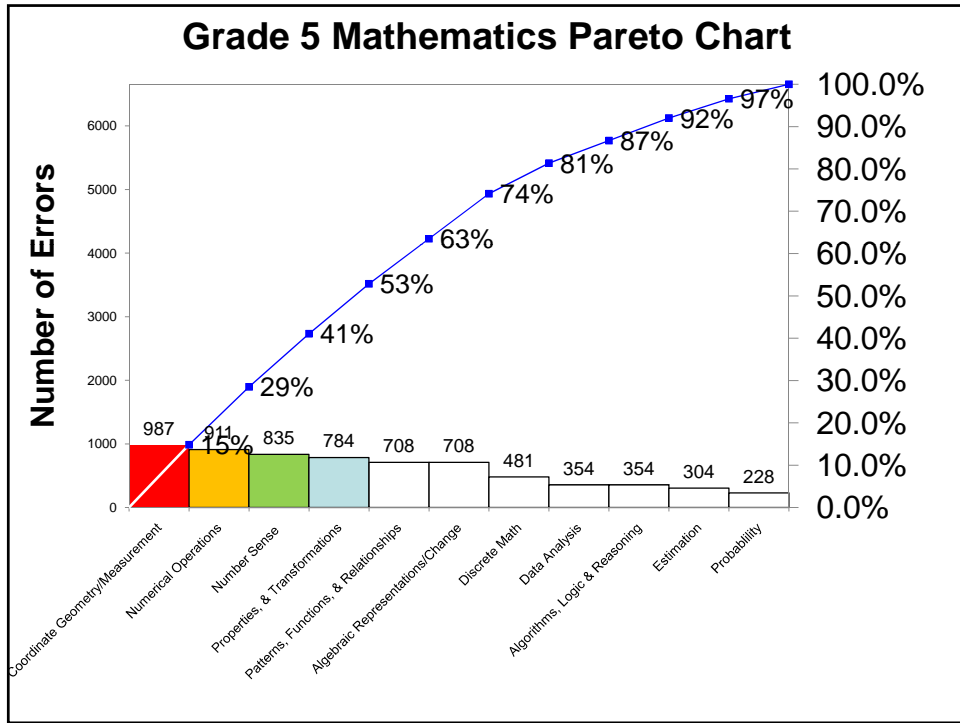
## Pareto Chart

The Pareto Chart is a sophisticated item analysis tool designed to help people see where errors are occurring.

The errors are in rank order from most errors to least errors.

The sloping line is cumulative percentage of errors. In the Murphy examples, district administrators focused upon the strands that composed approximately 50% of the errors.

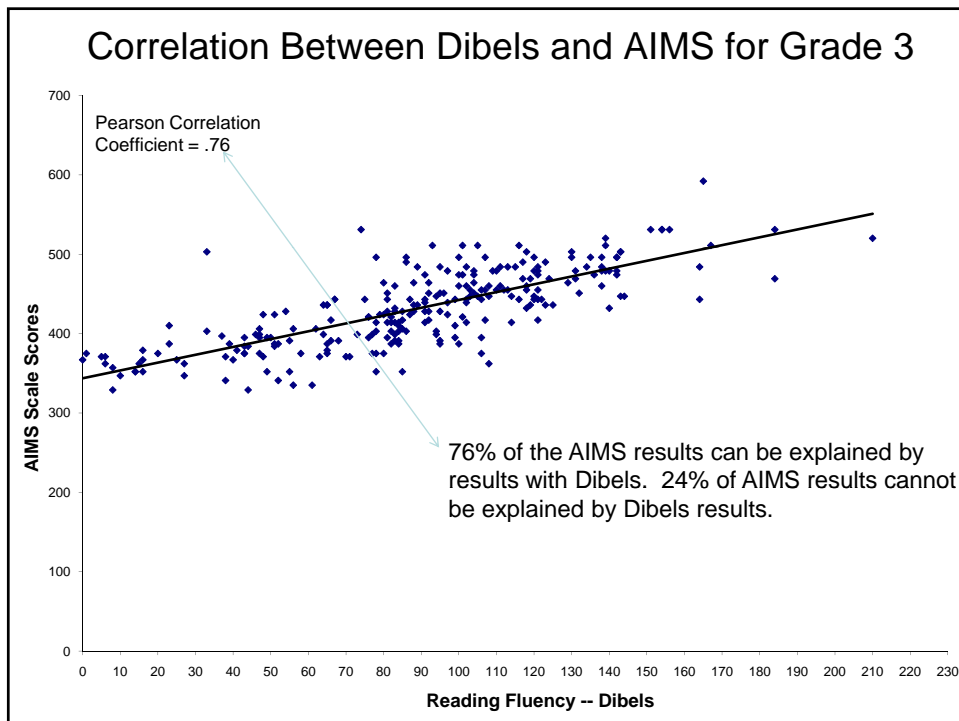
Data comes from the “Concept Performance Report.”

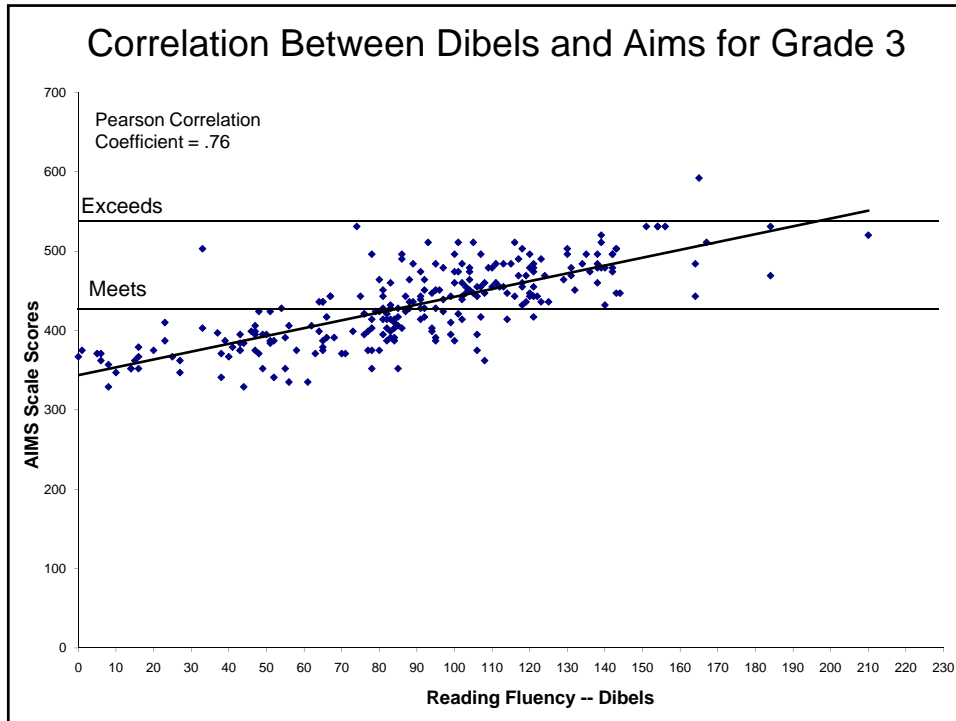


## Correlation Chart with Regression

The purposes of the correlation chart are two-fold:

1. Determine if educators can have confidence in specific instructional initiatives. For example, if the correlation coefficient is above .70, educators can have confidence that student success in a particular program will most likely result in success on AIMS. The correlation is between AIMS results and a district program results.
2. If the correlation is above .70, then the regression analysis will be of benefit. Educators will be able to predict what portion of students will meet standards on future AIMS exams.





## Control Chart

Invented in the 1930's by Walter Shewhart, the Control Charts are designed to separate special from common cause variation. The control charts replace ranking and the phrases "above average" and "below average."

The following control chart is a dot for each teacher in Murphy. Those above the Upper Control Limit are analyzed for ways to improve the total district; those below are analyzed for improvement.

