

# **Understanding the Concept of Value-Added Assessment**

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# Impact of Globalization

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- One of the most influential trends of the past 20 years is globalization
- It is arguably irreversible
- It has fundamentally changed the nature of opportunities & challenges facing education

# A Response to Globalization

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- Standards-based education is one of the responses to globalization
- Standards are an acknowledgement that our educational system can no longer leave some students behind
- Every student must now succeed
- Every student must exit the educational system with the understandings, skills, and dispositions needed to be successful in this global climate

# Implications of Standards-Based Education

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## For teachers

- Standards define the school curriculum
- For better or worse, teachers do not decide “what” to teach
- Every state now has a comprehensive set of achievement targets that specifically define what students are expected to know and be able to do.

## The bell-shaped curve vs. “j-curve”

- In the old reality it was appropriate that some students experienced success and others experienced failure
- In the new reality the j-curve describes a system in which **all** students must achieve proficiency.
- These new ground rules are apparent in the No Child Left Behind Act, which further dictates that by 2014 all high school graduates will demonstrate “academic proficiency.”

## Accountability

- In the past, the only people held accountable for academic failure were students
- Educators are now being held accountable for their students’ failures
- It is out of this foundation that value-added analysis and data-based decision making have arisen.

# The Ohio “Report Card”

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The state of Ohio will have three distinct types of measures of teacher / school / district quality, each focused on a different aspect of student achievement. All will be publicly available on the annual “Report Card” for schools and districts.

- “Status” reporting:  
summarizes overall performances on achievement tests, attendance, and graduation rates
- “Adequate Yearly Progress (AYP)” reporting:  
indicates how the school and district are helping each specific subgroup of students progress academically from year-to-year.
- “Value-Added Progress” reporting:  
measures the academic growth of each individual student to better understand the effects and support that schools and districts are providing for student progress.

# Student Achievement vs. Student Progress

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- Student achievement and student progress are complementary but different academic measures
- Student Achievement
  - Still our primary concern
  - Relatively dependent on demographic factors, e.g., socioeconomic status
  - Affected by factors outside the school
- Student progress
  - Relatively independent of demographic factors
  - Dependent on what happens inside the school
  - Common sense idea BUT brand new measure
  - **This is the concept underlying value-added assessments**

# Achievement vs. Progress

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## Achievement

- Measures a student's performance at a single point in time
- Relates directly to a student's demographics
- Compares student performance to a standard
- Critical to a student's post-secondary opportunities

## Progress

- Measures a student's progress between two points in time
- Not related to family demographics
- Compares student performance to his/her own prior performance
- Critical to ensuring a student's future academic success

By measuring students' academic achievement AND progress, schools and districts will have a more comprehensive picture of their effectiveness in raising student achievement.

# What is Value-Added Assessment?

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- Value-added is a statistical method used to measure the school's impact on the academic progress rates of individual students and groups of students from year-to-year.
- It theoretically allows schools and districts to interpret the impact of their curriculum, instruction, programs, and practices on student achievement. Simplistically, a value-added "score" is calculated in the following manner:

$$\text{Growth} = \text{Observed Measure (recent)} - \text{Baseline Measure (prior)}$$

- Taking a student's prior or predetermined achievement level (baseline) and comparing it to the student's recent achievement (observed) is designed to focus on growth over time.
- It is the difference between each student's estimated/expected performance and the actual performance, yielding a "residual variance" or value-added score that can be attributed to the effects of the teacher and school.

# The Benefits of Value-Added Assessments

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- Value-added offers an objective, more accurate way to measure student progress and the influence schools have on students' educational experiences. With this information, teachers are better able to:
  - Monitor student progress- from low-achieving to high-achieving- ensuring growth opportunities for all students
  - Modify instruction to address the needs of all students
  - Align professional development efforts in the areas of greatest need

# The Benefits of Value-Added: Administrators

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Principals and administrators will be better able to:

- Measure the impact of educational practices, classroom curricula, instructional methods, and professional development on student achievement
- Make better-informed, data-driven decisions about where to focus resources to help students make greater progress and perform at higher levels
- Benchmark progress against other districts and schools
- Identify best practices and implement more effective programs for their student population

# Value-Added Frequently Asked Questions (FAQs)

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# #1: Why is measuring both achievement and progress important?

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- Achievement measures provide educators with a snapshot of students' growth at a single point in time and how well those students perform against a standard.
- Progress measures provide a more complete, accurate picture of student growth from year-to-year, including how much growth/gain a student or groups of students make over time.
- By combining achievement and progress information, educators will have a more comprehensive picture of their impact on student learning.

## #2: How can value-added information help educators improve teaching and learning?

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- Provides important diagnostic information that was not previously available with traditional achievement reporting.
- Allows educators to assess their schools' impact on student learning.
- Can help initiate conversations about the efficacy of curriculum, instructional practices, and programs.
- Allows educators to better identify what is working well and areas for improvement to help individual students and groups of students.

### #3: Is it possible to show progress with all groups of students, including special education, gifted, and low-achieving?

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Yes.

- If tests have enough “stretch” to measure growth of both low- and high-achieving students, it is possible to measure all groups of students’ progress.
- The value-added methodology used is sensitive to individual students’ achievement levels.
- It measures growth from the end of one year to the end of the next year, regardless of whether a student performs below or above grade level.

## #4: The value-added methodology seems complicated. How can people understand the measure?

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- While the statistical methodology used for value-added analysis is complex, the data produced are valid, reliable, and presented in readable charts and graphs. Please also see help screen.
- If we understand the information derived from the value-added reports, we can use same to make sound decisions about improving student achievement.

## #5: Does value-added analysis require additional testing?

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- No new testing is required.
- The analysis uses existing standardized test data to produce progress reports and can only be done where annual testing is provided (which is everywhere).

## #6: How can teachers be innovative or creative if student progress is based on test scores?

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- The value-added approach was developed to estimate each student's academic growth over his/her school year in each subject.
- It does not suggest a particular method for encouraging this growth.
- Thus, teachers can and must be flexible, innovative, and creative in their approaches to move all students toward higher levels of achievement.
- The methods teachers use to help their students are still left to their professional judgment.

## #7: What kinds of test data are used for value-added analysis?

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Test data must meet the following criteria to be used for value-added analysis:

- Be highly correlated with curricular objectives
- Have enough “stretch” to measure the growth of both low- and high-achieving students
- Meet appropriate standards of test reliability

## #8: Do socioeconomic or other demographic factors of a school's student population impact progress?

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- Demographic variables have no significant relationship with student progress measures.
- Value-added analysis measures the change in students' academic achievement levels from one point in time to another (i.e., year-to-year).
- Factors that remain relatively constant over time, such as socioeconomic status, have shown little or no impact on student progress.

## #9: Can you measure the progress of students and schools with high mobility rates?

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Yes.

- Value-added analysis includes all students for which there is sufficient test data, including highly-mobile students.
- A school's impact on highly-mobile students may be less than its impact on students with more stable enrollment histories.
- However, all students must be included in the school's analysis to ensure that highly-mobile students receive the same level of attention as non-mobile students.
- Highly-mobile students also tend to miss more tests than other students. As a result, their scores are "weighted" less than students who are able to take all of the tests.
- Students with a more complete testing history have a greater influence on a school's value-added results.

## #10: What will be the impact of value-added results on the “Report Card”?

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- If a school/district demonstrates two consecutive years of “above” expected progress, the rating will improve.
- If a school which was already designated “Excellent” demonstrates two consecutive years of “above expected” value-added progress, the rating would be revised to “Excellent with Distinction.”
- Demonstrating three consecutive years of “below expected” progress would result in a lower rating.

# Conclusion

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For a given school to improve its value-added results:

- ALL teachers will need to understand the measure and be working to support each student as much as possible.
- This will be especially important even though not all grades and content areas currently have value-added results.

Additional information is available through the Ohio Department of Education at <http://www.ohiorc.org/value-added/default.aspx>.