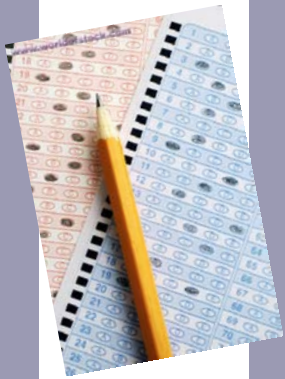


Gaining Consensus on Benchmark Testing

Aaron Spence, Ed.D.
Director of Curriculum and Instruction
Chesterfield County Public Schools

VATD October 28, 2009



Overview

- A note about audience
- What are benchmarks and why do we have them?
- The good and the bad
- It's how we use the benchmarks that makes the difference
- Other issues

Audience

Primarily for those thinking about benchmark testing

Let's have a dialogue if you

see something you like

have solutions

can commiserate

What are benchmarks?

I did a Google search...

benchmark testing - Google Search - Windows Internet Explorer

http://www.google.com/search?hl=en&source=hp&q=benchmark+test

Links CCPS InFocus CCPS INTRANET Chesterfield County Public Schools Customize Links Google Google Reader

File Edit View Favorites Tools Help

benchmark testing - Google Search

Web Images Videos Maps News Shopping Gmail more Search settings | S

Google benchmark testing Search Advanced Search

Web Show options... Results 1 - 10 of about 7,420,000 for benchmark testing. (0.22 second)

Performance Testing Sponsored Link
www.oracle.com/oracleloadtesting Load Test your Oracle Applications
Download your free trial now!

PassMark Software - PC Benchmark and Test Software
Benchmark and burn in test software to evaluate the performance of your PC computer hardware. USB serial and parallel loop back plugs.
[Download PerformanceTest 7](#) - [PerformanceTest](#) - [Download](#)
www.passmark.com/ - [Cached](#) - [Similar](#)

PassMark PerformanceTest - PC benchmark software
Twenty-eight standard benchmark tests are available in six test suites plus there are seven advanced testing windows for custom benchmarking.
...
www.passmark.com/products/pt.htm - [Cached](#) - [Similar](#)

Benchmark testing
Benchmark testing is a normal part of the application development life cycle. It is a team effort that involves both application developers and database ...
publib.boulder.ibm.com/infocenter/.../v8/.../c0005059.htm - [Cached](#) - [Similar](#)

Benchmark Testing White Papers (Benchmark Tests, Benchmarks ...
Read a description of Benchmark Testing. This is also known as Benchmark Tests, Benchmarks. Free detailed reports on Benchmark Testing are also available.
www.bitpipe.com/tlist/Benchmark-Testing.html - [Cached](#) - [Similar](#)

Benchmark (computing) - Wikipedia, the free encyclopedia
Computer manufacturers are known to configure their systems to give unrealistically high performance on benchmark tests that are not replicated in real ...
[en.wikipedia.org/wiki/Benchmark_\(computing\)](http://en.wikipedia.org/wiki/Benchmark_(computing)) - [Cached](#) - [Similar](#)

What is benchmark? - Definition from Whatis.com
Jun 9, 2005 ... Still, benchmarks can be useful and some companies offer benchmark programs for downloading or a benchmark testing service on their own site ...
searchcio-midmarket.techtarget.com/.../0,,sid183_gci211650,00.html - [Cached](#) - [Similar](#)

Sponsored Links
Performance Testing Guide
Top 10 Reasons to Conduct Performance Testing. Download
www.intertek-etlsemko.com

Benchmark your PC
CPU, Video, hard drive, RAM, C network benchmarking software
www.passmark.com

Benchmark Results Scan
Report has 100 questions & stu Detailed report with standards li:
www.ZIP-scan.com

[See your ad here »](#)



Tuning

- SQL statements
- Indexes
- Table space configuration
- Application code
- Hardware configuration.

Benchmarking is helpful in understanding how the database manager responds under varying conditions. You can create scenarios that test deadlock handling, utility performance, different methods of loading data, transaction rate characteristics as more users are added, and even the effect on the application of using a new release of the product.

Benchmark testing methods

Benchmark tests are based on a repeatable environment so that the same test run under the same conditions will yield results that you can legitimately compare.

You might begin benchmarking by running the test application in a normal environment. As you narrow down a performance problem, you can develop specialized test cases to increase the scope of the function that you are testing. The specialized test cases need not emulate an entire application to obtain valuable information. Start with simple measures and increase the complexity only when necessary.

Characteristics of good benchmarks or measurements include:

- Tests are repeatable.
- Each iteration of a test starts in the same system state.
- No other functions or applications are active in the system unless the scenario includes some amount of other activity going on in the system.

Note:

Started applications use memory even when they are minimized or idle. This increases the probability that paging will skew the results of the benchmark and repeatability rule.

- The hardware and software used for benchmarking match your production environment.

For benchmarking, you create a scenario and then applications in this scenario several times, capturing key information during each run. Capturing key information after each run is of primary importance in determining the changes that might improve performance of both the application and the database.

Related concepts

- [Benchmark preparation](#)
- [Benchmark test creation](#)

What is benchmark? - Definition from Whatis.com - Windows Internet Explorer

http://searchcio-midmarket.techtarget.com/sDefinition/0,,sid183_gci211650,00.html

Links CCPS InFocus CCPS INTRANET Chesterfield County Public Schools Customize Links Google Google Reader (1)

File Edit View Favorites Tools Help

What is benchmark? - Definition from Whatis.com

Home > Midmarket CIO Definitions - Benchmark

SearchCIO-Midmarket.com Definitions (Powered by Whatis.com)

LOOK UP TECH TERMS

Search listings for thousands of IT terms:

Browse tech terms alphabetically: [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#)

benchmark

DEFINITION - A benchmark is a point of reference by which something can be measured. In surveying, a "bench mark" (two words) is a post or other permanent mark established at a known elevation that is used as the basis for measuring the elevation of other topographical points.

In computer and Internet technology, the term may have any of these meanings:

- 1) A set of conditions against which a product or system is measured. PC magazine laboratories frequently test and compare several new computers or computer devices against the same set of application programs, user interactions, and contextual situations. The total context against which all products are measured and compared is referred to as the benchmark.
- 2) A program that is specially designed to provide measurements for a particular operating system or application.
- 3) A known product with which users are familiar or accustomed to that other newer products can be compared to.
- 4) A set of performance criteria which a product is expected to meet.

Laboratory benchmarks sometimes fail to reflect real-world product use. For this reason, Eric Raymond defines a benchmark as "an inaccurate measure of computer performance" and cites the "old hacker's saying" that "In the computer industry, there are three kinds of lies: lies, damn lies, and benchmarks."

Still, benchmarks can be useful and some companies offer benchmark programs for downloading or a benchmark testing service on their own site.

REFERENCE DES

Small Busine

NEWS, TIPS & M

- Seven tips for
- Data storage tec (ARTICLE)
- Improving your bus (DOWNLOAD)
- Information secur (TIP)

VENDOR CONTENT

- Double-Take Sof (STUDY)
- Double-Take Sof (PRODUCT OVER)
- Voice and Vid (CAST)

Benchmark - Wikipedia, the free encyclopedia - Windows Internet Explorer

http://en.wikipedia.org/wiki/Benchmark

Links CCPS InFocus CCPS INTRANET Chesterfield County Public Schools Customize Links Google Google Reader (1)

File Edit View Favorites Tools Help

W Benchmark - Wikipedia, the free encyclopedia

Help us improve Wikipedia by [supporting it financially](#). Try Beta [Log in / create account](#)

[article](#) [discussion](#) [edit this page](#) [history](#)

Benchmark

From Wikipedia, the free encyclopedia

The term **benchmark** originates from the chiseled horizontal marks that [surveyors](#) made, into which an angle-iron could be placed to bracket ("bench") a [leveling rod](#), thus ensuring that the levelling rod can be repositioned in exactly the same place in the future.

Benchmark may refer to:

Other uses


- [Benchmark \(computing\)](#), the result of running a computer program, or a set of programs, in order to assess the relative performance of an object by running a number of standard tests and trials against it
- [Benchmarking](#), the process used in management in which organizations evaluate various aspects of their processes in relation to the best practice, usually within their own sector
- [Benchmark Capital](#), a venture capital firm behind various startups, such as (and including) eBay.
- Call Center benchmarking is relatively new and was first initiated at Purdue University by Dr. Jon Anton in 1995 with a grant from IBM. After six years of research, the Purdue database of almost one terabyte of performance metrics is constantly being enhanced by new participants, and is now outsourced for data management, maintenance, and information distribution to BenchmarkPortal.

External links

- [BenchmarkPortal](#) - Call Center Benchmarking

This disambiguation page lists articles associated with the same title. If an [internal link](#) led you here, you may wish to change the link to point directly to the intended article.

Categories: [Disambiguation pages](#)



WIKIPEDIA
The Free Encyclopedia

navigation

- Main page
- Contents
- Featured content
- Current events
- Random article

search

Go Search

interaction

- About Wikipedia
- Community portal
- Recent changes
- Contact Wikipedia
- Donate to Wikipedia
- Help

toolbox

- What links here
- Related changes
- Upload file
- Special pages
- Printable version
- Permanent link
- Cite this page

languages

- Deutsch
- Français
- 한국어
- Italiano
- Nederlands

What are benchmarks?

Isn't it interesting that no results
came back for education?

What are benchmarks?

So we look elsewhere...

“ Interim [or Benchmark] assessments are usually given after 4-9 weeks of instruction and look more like conventional tests. They produce data that allow teachers and administrators to analyze learning problems and intervene with struggling students. These are the kinds of assessments touted by Rick DuFour, Mike Schmoker, Doug Reeves, Jeff Howard, and other American researchers and are the core of DuFour’s ‘Professional Learning Community’ process. ”

Source: Sept. 15, 2008 issue of the Marshall Memo (www.marshallmemo.com/articles/Marshall9-08.pdf) and “Interim Assessments: A User’s Guide” by Kim Marshall in Phi Delta Kappan, September 2008 (Vol. 90, #1, p. 64-68)

Why do we need benchmarks (or do we)?

In many ways the discussion about benchmark testing has been framed as a battle between...

Good and Evil



Take a stand



All schools, all teachers, and all students
benefit from benchmark assessments.

Voices from the Dark Side

- I assess my kids all the time, and these are just telling me what I already know...
- We spend too much time testing and not enough time teaching...
- I want to teach what I want when I want as long as I get where I need to be by the SOLs...
- My kids pass their SOLs already, so this doesn't make sense...

Feel the Force

- Good teachers know what their kids know, but do others know what their kids know? And are they assessing their own teaching strengths relative to others?
- It's a good idea to prepare kids to take tests...
- We should make sure that our classrooms have an aligned and thoughtfully paced curriculum...
- Do all of our kids pass the SOLs, or just most of them? Are there differences between this year's students and last year's students?

The truth

- Benchmarks are neither good nor evil. They are tests.
- It's what we do with the information from these tests that makes the difference.

Read this article

[The Best Value in Formative Assessment](#)

By Stephen and Jan Chappuis from Educational Leadership, Volume 65, Number 4 (available in the EL archives at ASCD.org).

The truth

//

Benchmark assessments, either purchased by the district from commercial vendors or developed locally, are generally meant to measure progress toward state or district content standards and to predict future performance on large-scale summative tests. A common misconception is that this level of assessment is automatically formative. Although such assessments are sometimes intended for formative use—that is, to guide further instruction for groups or individual students—teachers' and administrators' lack of understanding of how to use the results can derail this intention. The assessments will produce no formative benefits if teachers administer them, report the results, and then continue with instruction as previously planned—as can easily happen when teachers are expected to cover a hefty amount of content in a given time.

//

Source: Chappuis, S. and Chappuis, J. (2008). The best value in formative assessment. *Educational Leadership*, 65 (4), 14.

Best practices in benchmark use

- Don't just give the test; collect the data.
- Don't just collect the data; analyze the data to identify student strengths and weaknesses.
- Don't just analyze the data to identify student strengths and weaknesses; plan targeted interventions and accelerations as needed.
- Don't just plan targeted student level interventions and accelerations; provide concise feedback to students and have students analyze their own data and set learning goals.

Best practices in benchmark use

- Don't just provide feedback to students; use the data to provide teacher level feedback and target instruction.
- Don't just use the data to target instruction; do so collaboratively.
- Don't just use the data in a collaborative setting; look across the district to target the use of resources and share across schools.

Gaining consensus

- You have to have a team structure in place (PLCs) where teachers and leaders are comfortable looking for data, asking probing questions, and sharing solutions.
- You have to have a structure in place to provide data quickly to teams.
- You have to articulate why you are doing this, and leadership has to establish that it's important.

What you need if it's going to work

A team structure...

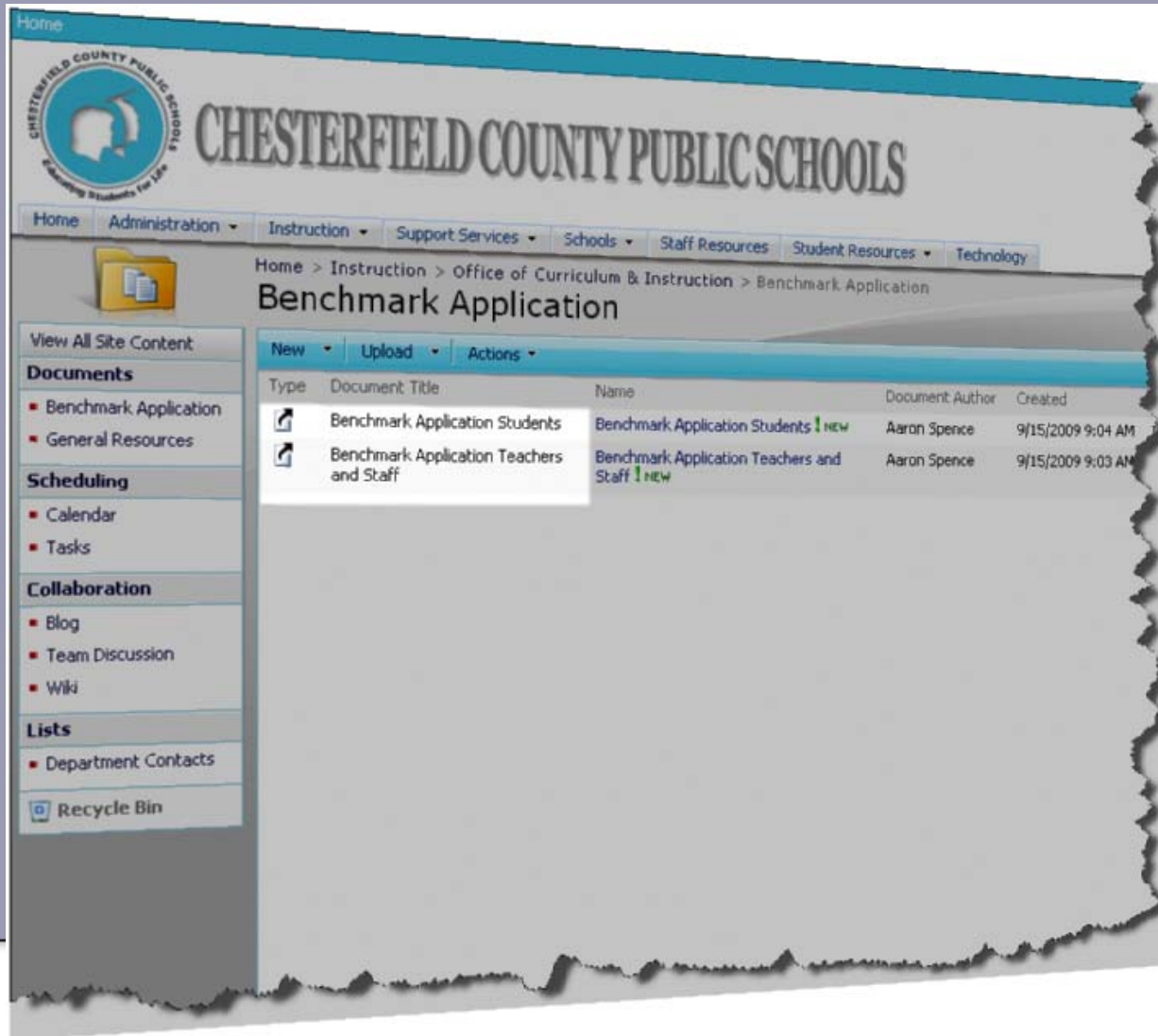
CCPS schools have embraced the PLC model.

“ Professional Learning Communities have emerged as arguably the best, most agreed-upon means by which to continuously improve instruction and student performance.”

Schmoker tells us that focused time spent talking about instruction, looking at the results achieved, and thinking about what we can do to improve student learning happens best when teachers make frequent use of common assessments.

What you need if it's going to work

A mechanism for getting the data quickly to the teams...



The screenshot displays the Chesterfield County Public Schools website interface. The header includes the school district logo and name, along with a navigation menu. The main content area shows a document library for the 'Benchmark Application' section, listing two documents: 'Benchmark Application Students' and 'Benchmark Application Teachers and Staff', both created by Aaron Spence on 9/15/2009.

CHESTERFIELD COUNTY PUBLIC SCHOOLS
Home Administration Instruction Support Services Schools Staff Resources Student Resources Technology

Home > Instruction > Office of Curriculum & Instruction > Benchmark Application

Benchmark Application

New Upload Actions

Type	Document Title	Name	Document Author	Created
	Benchmark Application Students	Benchmark Application Students NEW	Aaron Spence	9/15/2009 9:04 AM
	Benchmark Application Teachers and Staff	Benchmark Application Teachers and Staff NEW	Aaron Spence	9/15/2009 9:03 AM

View All Site Content

Documents

- Benchmark Application
- General Resources

Scheduling

- Calendar
- Tasks

Collaboration

- Blog
- Team Discussion
- Wiki

Lists

- Department Contacts

Recycle Bin

What you need if it's going to work

The types of data available...

Division Level

CCPS results

School Level

School results

Teacher level

Student results

Objective Results

What you need if it's going to work

The proper use of data in accountability...

Professional Learning from PD360

What you need if it's going to work

Leadership

CCPS District Leadership has articulated why testing is important.

CCPS District Leadership provides guidance on who should use benchmark testing, although we continue to work on a broader consensus in this arena.

CCPS District Leadership provides guidance on the use of tests for formative analysis.

CCPS School Leadership does this in our schools.

Final thoughts

Sometimes gaining consensus will happen naturally as excellent schools begin to consider their changing demographics and the ever-increasing pressure of rising AYP benchmarks.

Take a stand: All schools, all teachers and all students benefit from benchmark assessments.

We can be proactive with teaching rather than reactive to summative test scores. Moreover, during-the-year assessments are among the most powerful tools for closing the achievement gap. This is true because initial teaching, no matter how skilled, won't produce 100 percent proficiency.... When teachers use during-the-year assessments well, they can spot learning problems and fix them before they snowball.