Week Two - Student Achievement Data Analysis

Tyler Wood

OTL541K - Evaluation and Assessment

Colorado State University - Global Campus

Dr. Denise Geier

Sept. 13th, 2014

STUDENT ACHIEVEMENT DATA ANALYSIS

Figure 1.1 is a graph of reading scores for 4th grade in Washington State based on "student performance information for Measurements of Student Progress (MSP) … and the High School Proficiency Exam (HSPE) starting with the school year 2009-10" (OSPI, 2014a).

Figure 1.1
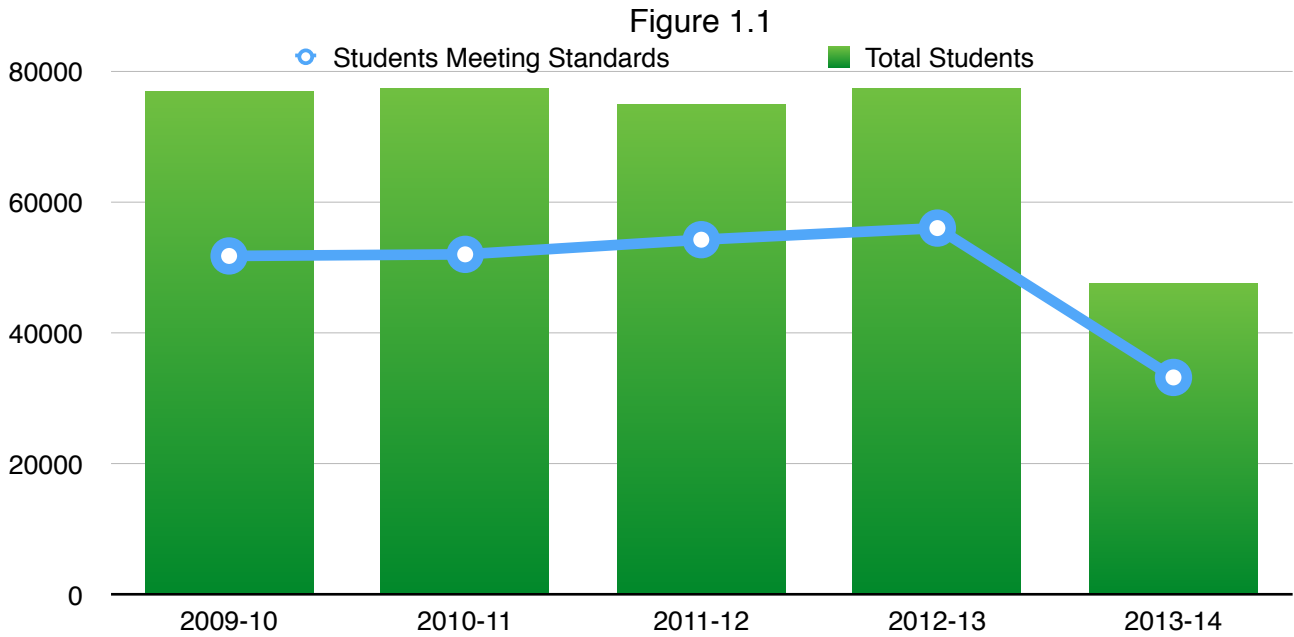
The reading test has 26 multiple choice or completion questions and 4 short answer questions. The test ranges from simple recall level questions to "strategic thinking" level questions. Starting next year Washington will be using the Smart Balanced Test to replace the MSP and HSPE tests (OSPI, 2014a).

This is an overall picture. For a more in depth view of the performance of the students in fourth grade reading I looked at the scores based on each question in the text in relation to their cognitive complexity level and content strands. Level 1 is "recall", level 2 is "basic application of skill/concept", and level 3 is "strategic thinking" (OSPI, 2014b). Figure 1.2

Figure 1.2
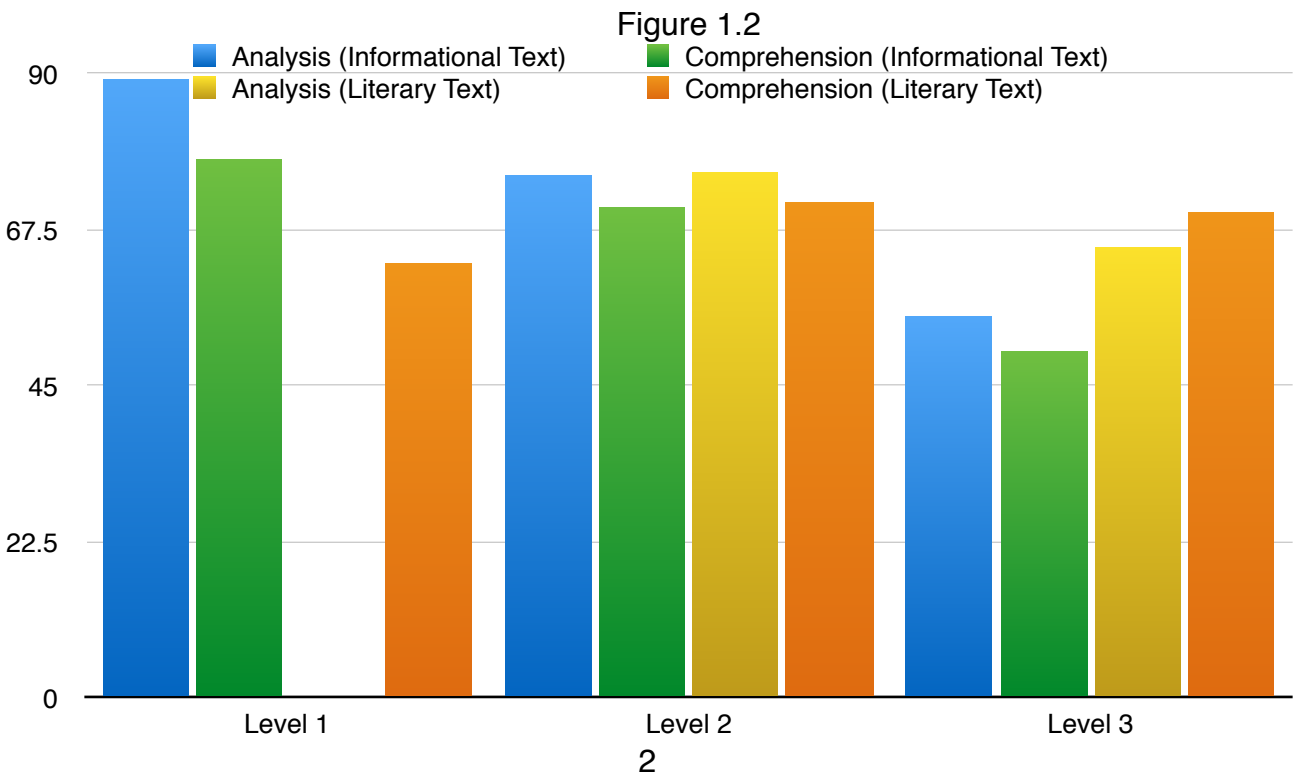
shows the scoring percentages of the students based on each level and content strand for the tests in the 2011-12 school year for an example of student strengths and weaknesses.

Student Strengths and Weaknesses

Upon looking into the data here it appears to me that the students are doing well at recalling from the informational text format, but having more trouble synthesizing the information into more strategic thinking. The strongest and weakest scores are in the informational text content strand. That tells me the students are memorizing information well, but they are having trouble taking that information and using it. This data should be used to implement a new plan to counteract the weakness of students utilizing information into a relevant broader purpose, not just recall it.

On the other hand, the students are fairly consistent at understanding and using the ideas from literary works while also recalling information from them. However, these scores are lower in the level 1 category. This tells me that the students have been versed in the ideas and concepts of the literary work, but are struggling more with the recalling. It seems the students have a focus based on content, but without enough cross-content synthesizing. Perhaps a way of activating student achievement is to be aware of this discrepancy and use the strength of the students for recalling information and present literary texts in the same way that informational texts are presented.

Teachers can brainstorm strategies for improving student understanding of information and how to help students recall literary information.

Data Strengths and Weaknesses

This test will be changed next year hopefully to diversify the testing because "improved formative assessment helps low achievers more than other students and so reduces the range of achievement while raising achievement overall" (Black & Wiliam, 1998). The data used from 2009-14 is based heavily on very few tests and very little formative assessments in class. "Yearly standardized tests are not adequate for a comprehensive assessment system" (Learning Points, 2004).

A strength with the data is the use of a diverse group of demographics for the statewide statistics. "In an era of accountability and increasing school choice, schools must carefully track their communities and come to know them well" (Learning Point, 2004). However, it was not tracked on the more in-depth data score. If we are going to track information to help plan the classroom differentiation for the students, then we should be tracking that data to the more detailed numbers. If that causes problems with identity or privacy, which I can understand, then how does only having very broad numbers really help? It follows logically, that if we are interested in these demographics, and we are using data to shape the classroom, then we would want to use demographics and data from the very smallest possible numbers to help shape the classroom to better serve the students.

What did I learn?

Firstly, it is really difficult to use data to understand student achievement when it is not a normal occurrence. This information is useful for differentiation and/or restructuring lessons for the future, but it still remains relatively hard to find and synthesize. I had to use two different pages of the website to find the data and make my own graph for easy viewing. The likelihood of a busy teacher being able to check on these scores easily and often is not high. If this information is supposed to be used to better the classroom environment and promote better student achievement, then the teachers should be able to see and use the information easily. Maybe there was a class on how to use the data for

teachers, but it made no mention of that specifically on the site. The testing and scores will be changing next year in Washington State, so perhaps this is something they are working on, but there is still no information about implementation as of yet.

Secondly, the data is only painting a very broad picture of achievement based on the points used. This is based on the tests used in this case. The tests are infrequent and do not use diverse, critical thinking questions. They are mostly multiple choice with a few short answers. This means the data can only tell us so much. Students can guess on multiple choice are use deductive reasoning, but we will not be able to tell what skills they used in answering them in may cases. Are they thinking critically or are they skimming the reading and guessing? A more diversified data stream will give a better picture of student achievement. However, that will mean adjusting, remaking, or throwing out the old testing model. This is already happening in Washington with the change to the Smart Balanced Test, but there is still not enough information to make a critic of the new model properly.

And finally, the data is useful when used, but based on the testing scores, there was not much change in the broader picture over the time I looked at. I can not be sure whether it was a lack of utilizing the data or ineffective changes, but the percentage of improvement over the years I looked at were not very different. This makes me wonder how the teachers and administrators are using this data. This brings me back to the first point, is it because it's not easily accessible and not being used? This exercise has opened my eyes to the possibilities and the problems with the current data used by schools and districts.

References

Black, P. & Wiliam, D. (1998, Oct.). *Inside the black box: raising standards through classroom assessment*. Phi Delta Kappa. Retrieved from http://www.ncpublicschools.org/docs/accountability/educators/insidetheblackbox1998.pdf

Learning Point Associates. (2004, December). *Guide to using data in school improvement efforts*. Learning Point Associates. Retrieved from http://www.learningpt.org/pdfs/datause/guidebook.pdf

Office of the Superintendent of Public Instruction (OSPI). (2014a). *Washington State report card*. Washington. Retrieved from http://reportcard.ospi.k12.wa.us/TemplateDetail.aspx?domain=MSPHSPE&schoolId=1&reportLevel=State&year=2009-10&gradeLevelId=4&groupLevel=District&waslCategory=1&chartType=1&yrs=2009-10

Office of the Superintendent of Public Instruction (OSPI-2). (2014b). *Teacher resource tool: reading: 4th grade*. Washington. Retrieved from https://www.k12.wa.us/TeacherResourceTool/Reading/Grade4.aspx