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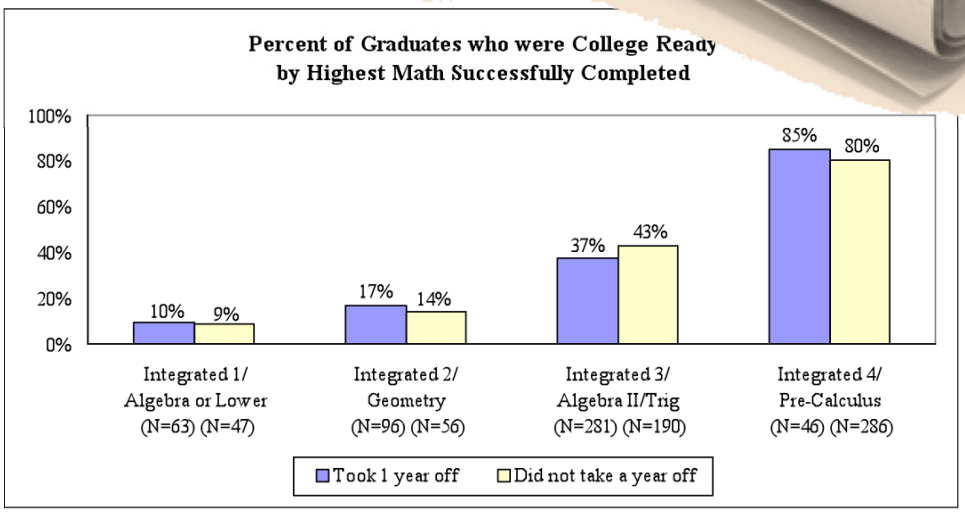

INSIDE THIS ISSUE

Editor's Corner

I've been pleased with the response of authors to peer review. This union of editors, authors, reviewers and readers is critical to advancing our knowledge and understanding our work. I continue to grow while finding it challenging to solicit manuscripts, find reviewers and manage the reshaping of papers for publication. With new authors getting their sea legs as academic writers, our move towards a thoroughly peer-reviewed journal is encouraging but incomplete.

My newest career as a junior medical researcher continues to inform my role as Journal Editor.
Editors from *The Standard Deviation* (Andrea Meld), *Curriculum in Context* (Gene Sementi and David Denton), and *The Washington Kappan* (Antony Smith) made lively a panel presentation at the WERA/OSPI Annual Assessment Conference in early December. I've passed along several recommendations for the growth of the Journal to the WERA Board of Directors as result of the session.

Look for manifestations of those recommendations in the upcoming May 2012 issue, which will focus on growth. We're inviting manuscripts in three areas:

- Growth Models. Gage Kingsbury of NWEA will assist with this editing section
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- Longitudinal Data Bases. Deb Came at OSPI has agreed to help edit this section.

- Case Studies illustrating issues with growth.--Duncan MacQuarrie of CCSSO will assist here.

Guidelines to authors and reviewers are posted on the WERA website in the publications section.

I wish to thank departing Advisory Board members Janet Fawcett, Janet Gordon and James Leffler for their service as the Journal advanced through the first few issues. And I would like to welcome new Advisory Board Members, Duncan MacQuarrie (CCSSO), Kimberly Markworth (WWU), and Cathy Taylor (UW).

-Peter Hendrickson, PhD

Editor's Column: Career and College Ready

The days of city high schools named "Classical, Trade and Commerce" are well past us--vestiges of my youth. But preparing students to leave high school career and college ready is at the very heart of Common Core standards and the assessments under construction to measure them. I've twice this year asked SMARTER Balanced Executive Director Joe Willhoft how the assessments will measure any difference in college or career readiness. At AERA in New Orleans last spring, he was clear, "There is no difference in the test" (Personal communication, April 8, 2011). Late this fall at the WERA/OSPI State Assessment Conference the reply was bit more nuanced, "There may possibly be a range of scores" for college and careers (Personal communication, December 9, 2011).

ACT's WorkKeys® are the assessment engine for their National Career Readiness Certificate used in more than 40 states but little mentioned on the West Coast. Three skills are tested: applied mathematics, reading for information, and locating information (ACT, 2011). A recent study found that the strongest non-cognitive predictors of workplace success were conscientiousness, agreeableness and some degree of extroversion (Sparks, 2011). And a Harvard white paper called for stepping back from college for all to promote "rigorous, career focused, real-world learning" to help those headed for middle skills careers. (Gewertz, 2011). Meanwhile some high school students are tailoring summer jobs to improve their admission essays (Anderson, 2011).

I asked an Everett colleague about those graduates who take jobs that don't appear to need the college prep demands of literature analysis, algebra/trig or chemistry. The former charter boat captain pointed out that a deck hand job should be seen as the first step on a career ladder --Fender, C. (Personal communication, December 9, 2011). As the manuscripts rolled in for this issue, college concerns clearly dominated the copy.

Paul Stern of Vancouver pulls together several statewide reports to look at high school preparation and college placement, in particular the importance of starting at the college level. **Jack Monpas-Huber** of Shoreline exercises his validity chops with a critical look at college and career readiness assessments.. **Michael Power** from Tacoma Public Housing provides a case study analyzing a college bound scholarship program partnership. Kent's **Andrea Meld** reflects on the ethics of using college admission test scores as measures of college readiness. And **David Spencer** of Othello reviews David Conley's influential *College and Career Readiness: Helping all Students Succeed Beyond College*.

Limited evidence indicates the level of preparation for post-high school work is improving slowly--much like the economy. ACT test takers this year scores showed 25% met all four CR benchmarks compared to 23% in 2007, even with higher percentages of students tested. And SAT scores found 43% scoring at a college ready level using different metrics. Looking back, you may wish to re-read **Brinton Ramsey's** comprehensive look at college readiness (2009) in *The Standard Deviation*.

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-Peter Hendrickson, PhD.

High School Preparation and College Placement, Data from Washington State

By Paul Stern

As districts look for performance metrics to gauge the effectiveness of their programs, one of the measures often considered is the percentage of graduates who are ready for college-level coursework. College students who are not ready for college-level coursework enroll first in "pre-college" courses. Also known as "remedial" and "developmental" courses, these terms all refer to courses taken at a college, but that do not earn credit towards a college degree – most often in the subjects of math and English.

Pre-college coursework is needed both by "traditional" college students entering straight from high school and "non-traditional" students who spent time in the workforce before returning to school. While the vast majority of students taking pre-college courses enroll at two-year colleges (Stephens, 2009), students at both public and private four-year colleges (Pavelchek, 2007) also need pre-college courses before they are ready for college-level coursework.

This paper will address the following topics regarding pre-college coursework:

- The importance of entering ready for college level coursework;
- The college placement process and the relationship between placement and enrollment;
- Methods of reporting the need for pre-college coursework;
- The relationship between high school preparation and college readiness; and
- Research implications for high schools and colleges.

The importance of starting at the college level

While starting in pre-college math does not prevent a student from attaining their educational objectives, it does present a substantial barrier to completion. Degree attainment rates are significantly lower for students who do not start at the college level (State Board of Community and Technical Colleges, 2011 and Washington State Transition Mathematics Project, 2008). As an example, the following data were provided by Columbia Basin College (CBC) in Pasco, WA. CBC identified 4,394 recent high school graduates, who enrolled in the 2006, 2007, and 2008 fall terms. These students identified themselves as enrolling with the intention of completing a two-year associate degree. Focusing on their experience in math, 80% of fall enrollees placed into a pre-college-level math course and 20% placed into a college-level math course. Among the students starting at the pre-college level, 12% completed a degree or certificate within three years. This is less than one-third of the 44% completion rate among students who started with college-level math (Figure 1).

The college placement process and the relationship between placement and enrollment

Students enrolling in college typically take placement tests in math and English before enrolling in their first course. Washington's public four-year colleges use the

	CBC Freshman Cohort Degree Seeking Students Fall 2006-2008	
Entering Cohort	4,394	
	80%	20%
	Placed into Pre-College Math	Placed into College Level Math
Placement by Level	3,514	880
Completed an AA or Certificate in 3 years	419	391
Percent Completing in 3 years	11.9%	44.4%

Figure 1
Math Placement and Degree Completion Rates of Incoming Students at CBC

Math Placement Test (MPT) managed by the University of Washington (UW). Most of the two-year college system uses the COMPASS or ASSET test (published by ACT), the Accuplacer (published by the College Board), or a locally-developed test. Most students choose to take a placement test shortly before taking their first college course. However, students are only required to take a placement test before enrolling in a math or English course, or in a course with a pre-requisite of a college-level writing or reading course. Some students choose to not take a placement test until their second year of college and others take a placement test, but defer enrolling in the related course until later in their college career.

The 2007 Washington State Legislature passed 2SHB1906 which called for the development of a common college readiness test and a uniform cut score for Washington's Public College System (Washington State Legislature, 2007). In response to the legislation, the UW aligned the MPT with Washington's College Readiness Mathematics Standards (Transition Math Project, 2008). The new aligned **General Math Placement Test (MPT-G)** is used by Washington's public baccalaureate universities for the majority of students entering directly from high school.

With movement toward new Common Core State Standards across the K-12 system, efforts to implement the MPT-G across Washington's two-year college system are on hold. At this time, most community and technical colleges (CTCs) continue to use COMPASS, ASSET, and Accuplacer for placement purposes. At present, each college still sets their own locally-

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determined cut scores for placement.

Even among colleges using the same placement test, the scores needed to place at the college-level vary widely. Of the 23 colleges that use COMPASS surveyed by a Lower Columbia College staff member, no two had the same placement guidelines for math (McGee, 2007). A student who just meets the score needed to place into college-level math at Yakima Valley or Columbia Basin College would need to complete one or two pre-college math courses before enrolling in a college-level course at Clark College in Vancouver.

School District Study Findings

The Social & Economic Sciences Research Center (SESRC) at Washington State University has conducted research studies for six school districts over the last 10 years to better understand the factors that predict whether a student will be ready for college-level coursework. The following sections of this paper draw heavily from studies conducted for the Northshore and Shoreline School Districts. Both studies were funded in part by WERA research grants.

In 2007, the Northshore School District (NSD) pooled data from the graduating classes of 2005 and 2006 to better understand and improve student preparation and graduates' secondary-to-postsecondary transition. The Shoreline School District (SSD) study, conducted as part of their Transition Math Project grant, looked at the enrollments of the graduates of 2003, 2004, and 2005 at Shoreline Community College.

Both studies drew from similar data sets. Student transcript and student characteristics data from the districts were matched to public college enrollment and placement test data and to higher education enrollment and remediation data from the Graduate Follow up Study (Mann, 2009). Students included in the studies were recent graduates from high school who had been enrolled in the district for at least three years prior to graduation. Presented findings are representative of the patterns noted in similar reports for other districts in Washington (WSU, SESRC 2011). The findings are shared with the permission of the school districts.

Timing of Placement Test and First Related College Course Enrollment

Both studies explored the relationship between placement scores and the subsequent enrollment in math courses. Data from NSD showed that regardless of the level of math they placed into, the vast majority of students enrolled in a math course within an academic quarter of taking the math COMPASS. However, students who placed into pre-college math were more likely to choose to wait a year or more before enrolling or to not enroll at all (29%), than students who placed at the college level (18%) (Figure 2).

The SSD study produced similar findings. Among students placing at the pre-college level, 38% took no math within two years of enrolling at the college,

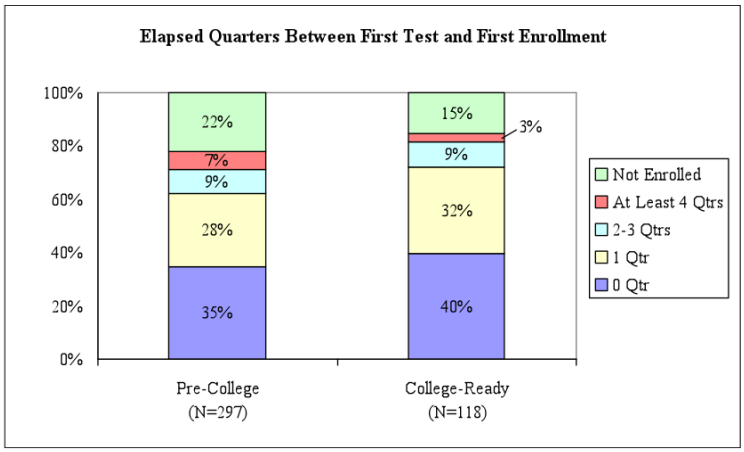

Figure 2
NSD Graduates' Placement Test and Enrollment Patterns 2005, 2006

compared to 16% of students placing at the college level (Figure 3).

NSD graduates placing at the pre-college level in English were also more likely to wait a year or more before enrolling in an English course, or to not enroll at all, than students who placed at the college level. One-quarter of students who placed at the pre-college level (26%) waited at least a year, or didn't enroll at all, compared to 11% of students who placed at the college level. (Stern, 2009)

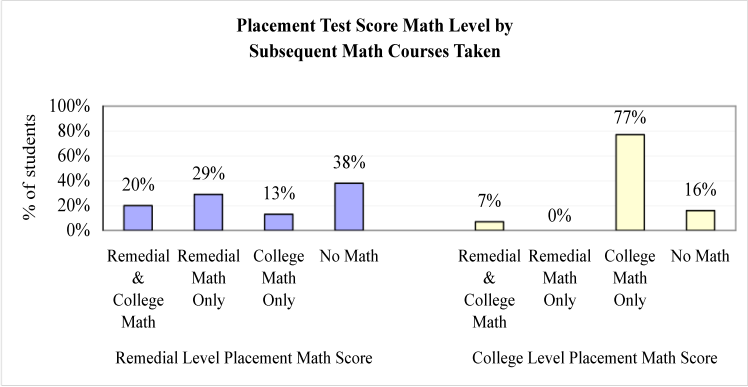

Figure 3
SSD Graduates' Math Placement Test and Math Course Taking Patterns (2003, 2004, 2005)

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Method of reporting the "need for" pre-college coursework

The most common reporting statistic is the percentage of recent high school graduates enrolled in college who took at least one pre-college math or English course. According to the most current state-level data available (Stephens, 2009), 48% of the class of 2008 attending a CTC in Washington took at least one pre-college math course; 10% took at least one pre-college reading course; and 18% took at least one pre-college writing course in their first year.

However, these enrollment rates are often misunderstood by policy makers and the press. In November, 2011, the Associated Press reported that "About a quarter of (students who enrolled in college) needed to take remedial courses in math, and 13 percent weren't ready for college English." (Gordon Blankinship, 2011). The problem is that the enrollment statistics do not reflect "student need" or demand for pre-college coursework and they do not measure whether or not a student is "ready for" college-level work.

The enrollment statistic leads the audience to assume that students who did not take a pre-college course were therefore ready for college-level coursework. However, as described in the previous section, many students do ***not*** take a math or English course and students who place at a pre-college level are more likely to ***avoid*** the subject in their first year of college than students who place at the college level.

Whereas most Washington state reporting identifies a 45-55% pre-college enrollment rate in math in the state's two-year public college system (State Board for Community and Technical Colleges, 2011), studies conducted by SESRC puts the actual ***need*** for pre-college enrollment at closer to 75% of all students enrolled at a Washington CTC. Detailed enrollment and placement data from Columbia Basin College for the entering Freshman Class of 2006-2007 provides evidence to illustrate this point. In Figure 4, the percentage of entering freshmen enrolled in a pre-college math course is 55%. Many would thus assume that 45% were enrolled in college-level math. However, only 15% enrolled in college-level math. Of the remaining 30% who took no math course, 19% placed at the pre-college level, 5.5% placed at the college level, and 5.5% did not take a placement test. Thus, the *need* for pre-college math courses is at least 74% for this group of students (55% enrolled in a pre-college course and 19% placed at that level), and the total could be higher depending on the readiness of the 5.5% "unknown" group.

The relationship between high school preparation and college readiness

All studies conducted by SESRC identified a clear relationship between a graduate's course taking history, grades, and state assessment scores and their readiness for college-level work. Of all the studies, the findings from NSD are most representative and are shared below. Findings for math are shared first and in the greatest detail. Findings for English are summarized later in this section.

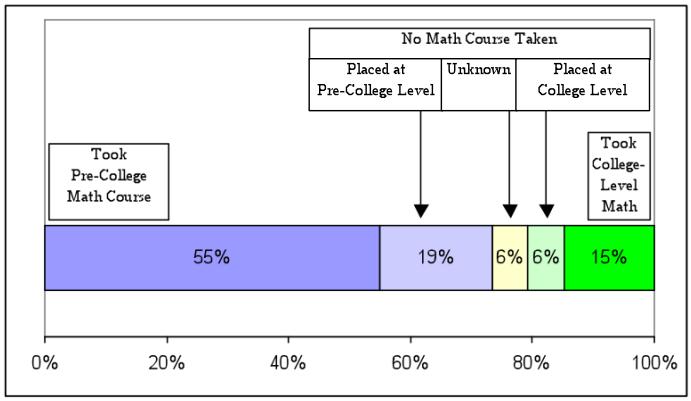

Figure 4
CBC 2007 Entering Freshmen Math Enrollments and Placement Test Results

To determine what contributes to a student's readiness for college-level coursework, one must first define "college-readiness." As discussed above, the traditional definition of "enrolled in a pre-college course" is insufficient. Placement test information and grades earned in the college course should also be included when available. For the purposes of the Northshore study, students were considered "ready for college-level coursework" if they met one of two conditions:

- they placed into college-level math but did not enroll in a course in the first year after graduation, or
- they enrolled in and passed a college-level course.

And students were considered "not college ready" if they met one of three conditions:

- they enrolled in a college-level course but did not pass it, or
- they enrolled in a pre-college-level course, or
- they placed at the pre-college level and did not enroll in any math courses.

Whereas literature (Adelman, 1999) focuses on Integrated 3/Algebra II as the gatekeeper course for college-level math, findings from Washington's high schools do not support this conclusion. In the Northshore study, using the criteria above, only a little more than a third (39%) of students who successfully completed Integrated 3/Algebra II were considered to be adequately prepared for college-level math whereas 80% of students completing Integrated 4/Pre-Calculus

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and 90% of students completing Calculus were found to be college-ready (Figure 5). Successful completion was defined was earning a C- or better in the course.

SESRC's interest in the topic of college readiness stemmed from statements claiming the state had high pre-college math enrollment rates because math is a

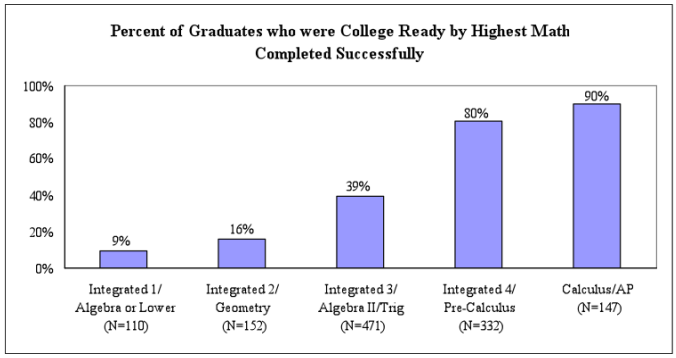

Figure 5
NSD College Readiness Rates by Math Course Completion

skill that is lost if it is not practiced, and that many students were not taking math in their senior year of high school. A simple analysis would appear to support this conclusion. For example, among graduates in the Northshore study, only 31% of the students who did not take math in their senior year were ready for college-level math compared to 59% of students who took a math class in their senior year.

However, the surface statistics mask an important pattern in the underlying data. Students who take math in their senior year are often taking higher-level courses like Integrated 4/Pre-Calculus or Calculus. Since these courses prepare students at much higher rates than others, the overall numbers are more reflective of the last course taken rather than the importance of retaining their math skills by using them in their senior year.

For a better statistical comparison, SESRC tested the importance of math in the senior year by comparing the performance of groups that stopped at the same level. For example, students who stopped at Pre-Calculus in their sophomore or junior year are compared to students who took Pre-Calculus in their senior year. When college readiness rates were compared this way, the assumption that math is a "use-it-or-lose-it" skill was not supported. None of the differences in Figure 6 were statistically significant at the 95% confidence level. The analysis suggests that the importance of taking math in the senior year is not to prevent "math atrophy," but rather because taking math in the senior year advances one's math preparation to a higher level.

This analysis also reveals an important role for high school course counseling. Regardless of the importance of taking math in the senior year, it is clear that

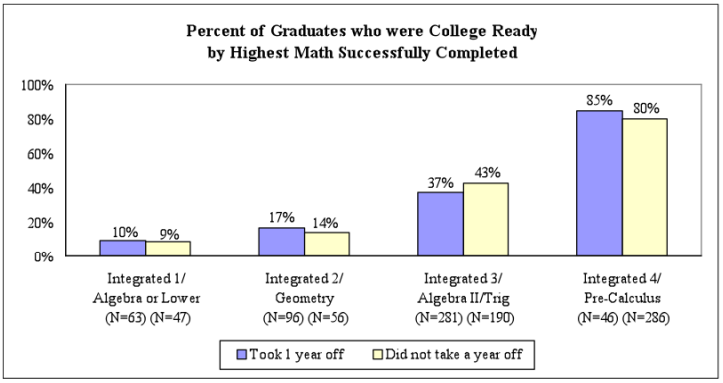

Figure 6
NSD College Readiness Rates by Math Course and Year Completed

Integrated 4/Pre-Calculus is an important course for those intending to enroll in college. Thus, the 281 students who stopped with Algebra II/Trig could have benefitted from taking Integrated 4/Pre-Calculus in their senior year. Taking Integrated 4/Pre-Calculus would have dramatically increased their odds of placing into college-level math.

Finally, to better understand the underlying relationships, logistical regression using all of the preparation and demographic variables was applied. A regression model can identify which of several related factors are most consistently associated with an outcome, such that they can be said to explain that outcome. With respect to graduates' readiness for college-level coursework, many factors are very closely related. As such, it is hard to discern which relationships are strongest. Simple cross-tabulation analyses are often not effective in determining which factors have true independent effects and which are merely related to significant factors. For example, taking math in the senior year is strongly correlated with taking a higher level of math, and students who do better on the math section of the Washington state assessment often have higher math grades in high school. Regression analysis is a useful tool to disentangle these inter-related factors.

For NSD and in every other similar study conducted by SESRC, the most important variable to predict whether a graduate would be ready for college-level math was the highest-level math course in which they earned a C- or better. Second and third (but not in a consistent order) were their GPA in all high school math courses and their scale score on the state math assessment. (Note that in Washington, the state assessments require students to demonstrate they possess 10th grade level skills.) Gender and race/ethnicity occasionally entered into regression models, but with lower levels of importance. Once the level, grades, and state assessment performance were taken into consideration, a student's special education status, eligibility for free or reduced price lunch, and whether or not they took math in their senior year were not important.

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Findings for College Readiness in English
Most of the factors important for readiness in math also apply to English. The challenge with analyses of high school English courses and readiness for college-level English is in the initial coding of high school classes. Unlike math, which has a structured and traditional hierarchy, there is a much wider variety of high school English courses. To conduct these analyses, districts categorized courses as being taught at a specific grade level. For example, even if a majority of students in Creative Writing are juniors, the district may identify the course as being taught at a 10th grade level.

Consistent findings for college readiness in English include the following:

- In general, college-readiness rates in English are higher (about double) than those for math.
- The level of the highest course passed with a C- or better, overall GPA in high school English courses, and the graduates' state assessment score in reading are the top independent factors for predicting college readiness. The order of the factors varied from study to study.
- It is impossible to determine the importance of taking English in the senior year because in every district studied, graduates were required to earn four credits in English.
- Although ELL students and minority students were more likely to enroll in a pre-college English class than White non-ELL graduates, one should not assume that the pre-college English issue only affects recent immigrants of color. In a multi-district analysis (Stern, 2006), almost two-thirds (62%) of graduates who took a pre-college English class did not participate in ELL. Further, many of those were identified as Caucasian (27% of the overall total).

Research implications for high schools and colleges
Districts are increasingly holding themselves accountable to preparing all students for college and the workplace, though few understand what being college-ready truly means. The above discussion provides one angle to understand college-readiness, particularly in math. If districts are going to improve the odds that their graduates are ready for college-level coursework, the focus should be on higher levels, rather than simply "more" math and English.

In addition, students need additional counseling and information about college-readiness and our K-12 and higher education faculty need to focus on a new set of relationships and conversations across the two systems about their discipline. The outcome of these conversations should be to facilitate students' transitions from one level to the next. Specifically:

Research implications for counselors and students:

- The need to enroll in pre-college level course work is a problem and barrier for many college students. Students who are able to move directly into college math have much higher odds of completing their degree.
- Starting in college with pre-college coursework does not mean students cannot go on to complete a degree. However, their progress will be slower in comparison to other students. There is a cost in both money and time.
- Passing a 10th grade level high school state assessment is not enough.
- Students need more than just Algebra II/Integrated 3 to have a high probability of moving directly into college-level math.
- Students should not take a math class senior year just to keep in practice – they should take a higher level math class to upgrade skills.

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-Paul Stern was the co-founder and former research manager at WSU's Social & Economic Sciences Research Center in Olympia. At SESRC he directed the Washington State Graduate Follow Up Study and his research interests included program evaluations, policy analysis, and student transitions from high school to college or the workplace. Paul is a past WERA Board member. He is currently an analyst with Vancouver Public Schools. Contact him at paul.stern@vansd.org.
Paul would like to thank his former long-term colleagues at SESRC, Dave Pavelchek and Candiya Mann, for their collaboration and co-authorship on many of the research projects cited here. Many of the insights and conclusions belong to them. Any errors contained in this manuscript belong solely to Paul.

Validity of College and Career Readiness Assessments

By Jack B. Monpas-Huber, Ph.D.

College and career readiness is quickly becoming the primary outcome of public education in the United States. Probably the clearest sign of commitment to this is the current national movement of states to adopt the Common Core State Standards (CCSS) and align with one of the two assessment consortia: the SMARTER Balanced Assessment Consortium (SBAC) or the Partnership for the Assessment of Readiness for College and Careers (PARCC). The purpose of the CCSS in mathematics and English Language Arts is to define what students should know and be able to do to be successful in college and career, and the SBAC and PARCC consortia will develop "next generation" assessments of the new standards. Washington State recently joined this movement by adopting the CCSS and, as a member of SBAC, committing to assess students with the new assessments in 2014-15.

As with any large-scale assessment program, the CCSS and consortium assessments will bring new inferences, decisions, and consequences. Districts and schools will realign their local "power standards" (Ainsworth, 2003), curricular materials, and assessment systems with these new national standards and assessments in order to meet new expectations of performance. Student scores will inform decisions about placement and instructional intervention and broader system-level inferences about curriculum and program effectiveness. Error in the scores will cause at least some students to be misclassified and educators to draw at least some wrong conclusions about instructional effectiveness. To acknowledge these consequences is to consider the validity of assessment, which is "the most fundamental consideration in developing and evaluating tests" (AERA, APA, & NCME, 1999). In this paper, I offer initial thoughts on the validity of college and career readiness assessment. Although there are many possible validity issues to explore (Messick, 1989), here I consider two: operational definitions of college and career readiness and the predictive validity of college and career readiness assessment.

Operational Definitions of College and Career Readiness

The first issue concerns the operational definition college and career readiness: What is college and career readiness, and how is it measured operationally? What is the validity of inferences from operational measurements to the reality of college and career readiness?

Probably the most familiar definitions of college readiness are empirical in nature and come from existing large-scale assessments. The major college testing companies publish "benchmarks" of college readiness based on correlation research into the relationships among exam scores, high school grades, and subsequent grades in college courses. ACT has developed college-ready benchmarks based on the relationship between ACT exam scores and grades in first-year college courses (ACT, 2011), and the College Board now offers similar benchmarks based on the PSAT and SAT (Wyatt et al., 2011).

College readiness is so defined as a level of achieved competency (observed in a test score) associated with a probability of earning particular grades in college level coursework. The contribution of this work is that it imbues test scores with meaning about their predictive value. Students can use the benchmarks to gauge their readiness for college level work, and schools can analyze summary-level benchmark data to evaluate how well their curriculum and instructional program are preparing students for college.

A related line of work involves the 12th Grade National Assessment of Educational Progress (NAEP). As the nation's only large-scale assessment of 12th grade students, the NAEP offers useful information about American high school students' preparedness for college and career level work. The Technical Panel on 12th Grade Preparedness Research recommended a series of validity studies to examine what inferences the 12th Grade NAEP can provide about preparedness for college and career (Loomis, 2011). The Panel recommended content alignment studies between the 12th grade NAEP and other assessments and judgmental standard setting studies to set cut scores on the 12th grade NAEP scale using definitions of preparedness for specific post-secondary activities. It also called for statistical studies linking the 12th grade NAEP to other assessments and a survey study to collect data regarding cut scores on other assessments used for placement decisions. It recommended benchmark studies to collect NAEP data on the students who have entered post-secondary activities (National Assessment Governing Board, 2009). Here again, college readiness is defined as scores on a scale along which certain scores may be defined, either statistically or judgmentally, as meaningful criteria for college or career readiness. An interesting aspect of this work is the implications for different kinds of agreement or disagreement about benchmarks for college and career readiness. Scores defined as college and career ready by one perspective (such as judgmental standard setting methods) may agree or conflict with scores defined as college and career by another perspective (such as benchmark studies of what happens to NAEP examinees once they enter college).

Both the college entrance exam benchmarks and the NAEP work are empirical, defining college and career readiness in terms of scores on scales that derive their significance from sophisticated statistical work based on large sets of quantitative data. The value of an empirical definition is that it facilitates verifiable generalizations about what is generally true across

Continued on next page

large population of people. In this respect it can counterbalance anecdotal definitions of college and career readiness based on individual case studies that tend to appear in the mainstream media.

However, there is more to college and career readiness than test scores. These empirical definitions of college readiness really describe "preparedness." According to NAGB (2009), "Preparedness focuses on academic qualifications, which are measured by NAEP. Readiness includes behavioral aspects of student performance—time management, persistence, and interpersonal skills, for example—which are not measured by NAEP." Conley (2007, 2011a, 2011b) calls attention a broader range of academic behaviors, skills and strategies that are necessary for students to succeed in college but are not necessarily taught in all high schools:

> Recent research has shed light on several other key components of college success. Most relevant for this paper are a range of cognitive and metacognitive capabilities, often referred to as *key cognitive strategies*, which have been consistently and emphatically identified by those who teach entry-level college courses as being of equal or greater importance than any specific content knowledge taught in high school. Examples of key cognitive strategies include analysis, interpretation, precision and accuracy, problem solving, and reasoning (Conley, 2011a, p. 1).

At this point, college and career readiness is primarily defined in empirical terms based on well-established measures. The SBAC and PARCC assessments will add to the current body of measures. However, the reality of college and career readiness is more complex than can be captured in test scores and course grades. As time passes and the gap between established empirical measures and the complexity of college and career readiness comes into clearer focus, it may important to consider a wider range of indicators and data.

Predicting College and Career Readiness

The second issue concerns the validity of inferences about two kinds of predictions: predictions about growth from elementary level measurements toward college and career readiness, and predictions from high school benchmarks about success in college and career. The original charge to the SBAC and PARCC assessment consortia was to measure the Common Core State Standards in English language arts and mathematics in grades 3 through 8 and high school so that all students leave high school prepared for postsecondary success (Duncan, 2010, p. 18175). The SBAC in particular aims to construct assessments that will be based on a vertical scale of achievement that will facilitate inferences about student growth from grade 3 to a high school criterion of college and career readiness (Washington State, 2010). How valid are these growth inferences? To what extent can measurements taken in elementary grades provide meaningful inferences about growth toward a high school criterion of college and career readiness?

Recent research by researchers at the University of Iowa offers a picture of how such a system could work. Furgol, Fina, and Welch (2011) and Dunbar and Welch (2011) asked whether an assessment, such as the Iowa tests, could be used to identify students that are on track for college and career readiness. They looked at longitudinal data from a large sample of Iowa students who took the Iowa Tests of Basic Skills each year from grades 5 to 11 and then took the ACT tests. They found, first, strong correlations between scores from the Iowa Tests at all grade levels and the ACT, which serves as some initial evidence of predictive validity. One key feature of the Iowa Tests is that they use a vertical scale that facilitates estimation and tracking of growth over time. Furgol, Fina, and Welch (2011) explored how to use this scale to determine cut scores on grade level achievement tests prior to 11th grade. They determined "scale scores required at each grade level to achieve the same relative standing within grade as the Iowa scale score corresponding to the ACT college readiness benchmark" (15). The authors concluded that scores from a vertical scale can be used to generate messages at lower grade levels to parents and children about progress toward college and career readiness benchmarks in high school. These studies thus represent initial evidence for the predictive validity of growth inferences about college and career readiness benchmarks.

Another aspect of this criterion-related predictive validity is the extent to which college readiness benchmarks are predictive of success in college. As mentioned above, testing companies have already established targets in the forms of the ACT Benchmarks (ACT, 2010) and the College Board Readiness Index (College Board, 2010) based on the empirical relationship between scores on a college entrance exam scores and success in college (usually first-year undergraduate GPA or grades of B or C in entry-level college courses). This kind of work has played a substantial role in the admissions policies of the nation's colleges and universities, but it is not free of validity threats (Atkinson and Geiser, 2009). The strongest predictor of success in college (as measured by undergraduate GPA) is the high school GPA, followed by the college entrance exam scores, but the best of these models only explain 25% of the variance in undergraduate GPA (Atkinson and Geiser, 2009). How well will the SBAC and PARCC assessments perform as predictors of success in college? Possibly the CCSS will better represent the expectations of competency for most colleges and universities and careers. In addition, the computer adaptive design of the assessments will improve the reliability of the scores, and by extension, their value as predictors of college and career readiness.

Discussion

As with any large-scale assessment program, the CCSS consortium assessments will bring new inferences,

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decisions, and consequences, and these will raise additional validity issues which will prompt the search for the appropriate validity evidence (Messick, 1989). This paper raised two initial questions about the validity of current empirical definitions of college and career readiness, and inferences based on prediction. SBAC and PARCC will add robust new measures to a landscape already populated with indicators, and contribute to a measurement tradition that, arguably, needs to expand to include new indicators of college and career readiness. There also appears to be growing validity evidence for predictions about growth from elementary grades toward high school benchmarks, and the evidence base for predictions about high school benchmarks to postsecondary success will surely grow as these assessments are implemented in the years to come.

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Case Study: *Multiple Agency Collaboration to Enroll Students in Washington State's College Bound Scholarship Program 2008 Through 2011*

By Michael A. Power, Ph.D.

In 2008, the Washington State Legislature created the College Bound Scholarship (CBS) program. The CBS program promises low-income Washington State students that if they graduate from a Washington state high school, fulfill other requirements, and gain admission to a college or technical school then the state will make it financially possible for them to attend. The legislature created the CBS program to encourage the students and their families to believe that college is financially possible for them despite their low-income.

Since 2008, the Tacoma College Support Network (TCSN) – an energetic and eclectic city-wide collaborative – has been working to assure that all eligible students in Tacoma have the opportunity to receive this scholarship. TCSN is led by Tacoma Public Schools (TPS) and the College Success Foundation, and includes over 40 community partners. A key priority of TCSN has been to enroll all eligible students in the CBS. Tacoma Housing Authority (THA) has been a key player in the partnership. All THA student residents are income eligible for the CBS, and the agency made it a top priority that every possible student in their program was signed up.

The Washington State College Bound Scholarship Program

The CBS pays tuition and mandatory fees at public college rates to the extent the tuition is not covered by state or federal financial aid, plus $500 each year for books. A student can use the scholarship at a Washington public community, technical, or four-year college, an approved, accredited independent private college or university, or at a public or private career school. It is renewable for up to four years.

Who Is Eligible for the College Bound Scholarship?

- The student must meet state guidelines for financial need at the time of enrollment and upon graduation;
- The student must graduate from a Washington State high school or home school with a cumulative GPA of at least 2.0;
- The student must not have committed a felony;
- The student must submit the Free Application for Federal Student Aid (FAFSA);
- The student must gain admittance to a Washington public community, technical, or four-year college, an approved, accredited independent private college or university, or a public or private career school; and
- Students and their parents must file an application before the end of the 8th grade.

Yet, at the beginning of the program nearly half of the state's children were disqualified from the scholarship assistance simply because they had failed to sign up by the end of eighth grade.

TCSN's Efforts To Enroll Students In The College Bound Scholarship Program

TCSN's efforts included the community efforts and in-house agency support.

Community Efforts

TPS students had the advantage of concerted community efforts that appear to have been among the most energetic in the state. TCSN became the key leadership group for the CBS program in Tacoma. Its leaders meet monthly to develop strategies to maximize the sign-ups. This visible support from the community mobilizes schools, administrators, and counselors to assure that students have the information and opportunities to sign up.

Every spring from 2008 through 2011, TCSN staged the *Tacoma is College Bound* event. Hundreds of eligible students and their families attended to receive answers to all their questions about the CBS and to sign up on the spot. Translators, entertainment, and food were provided. (Other communities are now staging similar events.)

In the spring of 2011, TCSN held *College Bound Saturday* at the University of Washington-Tacoma. This event focused on supporting students already signed up and their parents to assure the students will be eligible for the scholarship upon graduation. Over 200 students and parents attended. *College Bound Saturday* will be held again in spring of 2012.

Tacoma Housing Authority In-house Support for CBS Applications

In addition, THA supported CBS enrollment through several in-house efforts. Most importantly, THA added the CBS enrollment paperwork to the paperwork that THA must process each year with the families participating in its housing programs. Throughout the year, THA's Leasing and Occupancy Specialists provided CBS applications and information on the scholarship as they met with families for the annual review that THA conducts for housing purposes. In this way, families could sign up for the CBS when they conducted their normal business with THA. In addition, THA made CBS brochures and applications available at its housing sites and offices. THA's community newsletters ran several articles on the scholarship, and its AmeriCorps volunteer at THA community computer labs helped students to sign up online.

Results Of The Collaborative Effort

The results of the collaborative effort in Tacoma over these three years have been exceptional. Table 1 below shows the estimated enrollment rates for students in

Continued on next page

8th Graders Enrolled* in the Washington State College Bound Scholarship Program			
	2008-2009	2009-2010	2010-2011
Washington State	55%	68%	75%
Tacoma Public Schools	77%	90%	Approx. 100%

Table 1:
Estimates enrollment rates Tacoma Public Schools students 2009 to 2011

TPS for 2009-2010 through 2010-2011. The chart also compares those rates with the estimated rates within the Tacoma Public School district and within Washington State.

The estimated results show that for the first two years TPS's enrollment rates were significantly higher than the state-wide population of students. TPS is now at approximately 100% with the state not far behind. These are the results for 8th graders only since they have been the focus of enrollment efforts. Seventh graders have another year to sign up.

Exact counts of enrolled students are not possible due to students who do not permit the release of their name, students who sign up but are no longer eligible at the time the data are released, and student movement within the district's population. However, the HEC Board, TPS, and TCSN agree that these estimates are as close as we can come to the actual count. This count was updated on October 21, 2011 with the latest information from the HEC Board.

Due to student movement in and out of school districts, it will never be possible to achieve exactly 100% enrollment, but current results indicate that nearly all eligible students in Tacoma schools are signing up for the scholarship.

Ongoing Challenges

College Preparation

Enrolling in the CBS is only one step toward college or post graduate schooling or training. A student must also do well in school and take the appropriate classes that would prepare him or her for college. Helping a family and a student prepare in these and other ways must be the focus of other efforts.

To help guide this work without duplicating effort, TCSN partners developed a document (Appendix) delineating what schools and community partners need to do to assure students graduate from college prepared to succeed in college should they choose to attend. This document guides the work of the subcommittees as they move the conversation forward from signing students up, to assuring their success.

Need for Evaluation of Student Post-Secondary Outcomes

The Washington Legislature created a wonderful opportunity through the College Bound Scholarship but did not direct the HEC Board to conduct an evaluation of the success of the program. In order to justify continuing to fund this program, the legislature will need data on how well it is working and the benefit to the state.

- Key elements that should be studied include:
- Successful practices of local school districts and communities in enrolling students for the CBS;
- Successful practices of local school districts and communities in preparing students for college or technical school work;
- Graduation rates of CBS students compared to non-CBS students;
- Preparedness for post-secondary work among CBS students, e.g., percent who need to take additional coursework prior to earning college credit;
- Post-secondary success rate of CBS students compared to non-CBS students; and
- Estimates of financial benefit accruing to the state as a result of these students being able to participate in post-secondary work.

Further Information

The most up-to-date information on the College Bound Scholarship is always at the website of the HEC Board *www.hecb.wa.gov/paying/waaidprgm/CollegeBoundScholarship.asp*. More information about Tacoma Housing Authority's College Bound Scholarship initiative can be found at *www.tacomahousing.org/education*.

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Tacoma College Support Network (TCSN)

The following approach to help prepare all Tacoma students be college ready was approved unanimously by TCSN members on 4/21/2011

Creating and Sustaining a College-Going Culture and Preparing All Students to be College Ready

*The foundation of **Early Awareness, Academic Preparation and Social Behaviors** a student needs to be ready to enroll in and succeed in post-secondary education*

What specific roles/duties can each group play in supporting the three aspects of college readiness?	EARLY AWARENESS The information required for students and families to understand the various college and career options.	ACADEMIC PREPARATION The academic coursework and content skills needed to enter and succeed in post-secondary education without remediation.	SOCIAL BEHAVIORS The socio-emotional and cultural behaviors needed to persist in college and build networks of support.
Tacoma Public Schools K-12	• Celebrate college days, weeks, months... • Begin awareness of expectations early, in elementary school • Engage parents • Invite colleges onto school campuses • Bring in college mentors/tutors • Bring in speakers, alums from colleges • Utilize Career Cruising • Establish College Bound Scholars "champions" in all schools	• Align coursework and HS graduation requirements with college entrance • Provide supportive resources for all students to be successful in their coursework • Help students utilize summer academic opportunities • College Bound Scholars "champions" to connect students with community organizations and support groups	• Students transition successfully to college/workplace • Students develop leadership skills • Advisories are used with students and parents • Staff professional development opportunities to improve skills
Community Organizations and College Access Providers	• Assist with planning college awareness events • Support college visits • Provide summer experiences at college • Bringing back alums as mentors/tutors • Facilitate financial aid and college admissions information sessions • Career awareness (workshops, day, job shadows)	• Providing tutoring and other academic support • Study skills development • Extended day • Different avenues to academic work • Summer programs and activities • Career explorations • Adopt local schools	• Skills development in areas such as - Resiliency/persistence - Self advocacy - Understanding cultural issues -Cultural competency -Self-discipline Goal setting -Leadership development
Post-Secondary Institutions	• Regular awareness events at local schools • Host events on campus • Provide college visits, including when possible overnight stays	• College in the high school • Sharing data regarding remediation, entry level courses, K-16 pipeline • Provide rigorous summer programs and activities • Offering bridge programs between school and college	• Supportive resources on campus for low-income, 1st generation students • Ability to navigate complex systems • Orientation class for everyone during 1st term in college • Peer support systems • Promote study groups • Provide mentoring

Suggestions for Tables and Figures Using APA Style

By Andrea Meld, Ph.D.

The Sixth Edition of the *Publication Manual for the American Psychological Association* (2010) devotes an entire chapter to guidance on preparing tables and graphs. Since the previous edition was published, "…few areas have been affected by technological developments more dramatically than the methods available for the display of results …tables, graphs, charts, maps, drawings and photographs" (p. 125). The use of electronic images has dramatically changed the way that results of experimental inquiry can be displayed. The use of tables and figures, especially graphs and diagrams, has the potential to communicate complex information effectively and efficiently, if used appropriately. This article is not meant to take the place of more detailed discussion found in the manual, but rather offer some tips to help get new writers started.

Tables

Tables present numbers or words in rows and columns. They tend to work best when they are used to look up or compare individual values, and provide values that need to be expressed with precision (Few, 2004). Table X, below, shows an example of a table in APA format. These data are fictitious.

Table X

Number of Children With and Without Pets

	Girls		Boys	
Grade	With	Without	With	Without
3	250	240	255	239
4	260	220	266	210
5	280	210	282	205
6	320	200	336	199
Total	1110	870	1139	853

APA style, as delineated in the manual, can be used is to create clear and concise tables. Here are some pointers to keep in mind:

- First, ask yourself whether the table is even necessary. It should add information to your article but not duplicate results discussed in the text.
- Number all figures and tables with Arabic numerals in consecutive order.
- The title of the table should be brief and explain the data that you are presenting.
- Limit table content to what is essential, avoiding surplus elements.
- Readers should find that tables are integrated with the text, and should also be able to understood tables on their own.
- Make sure that every column has a column heading.
- Headings should explain the items below rather than items going across the table (See Table X.).
- Limit the use of lines and avoid vertical lines, using white space as needed for readability.
- If you are using several comparable tables, use a consistent format.
- Explain any uncommon abbreviations and the use of special symbols, boldface and italics in the note section under the table, but standard abbreviations for non-technical terms and statistics do not require explanation.
- Keep each table to one page, maximum.
- Tables can be either single or double spaced.
- Make sure you have obtained written permission for any copyrighted materials.

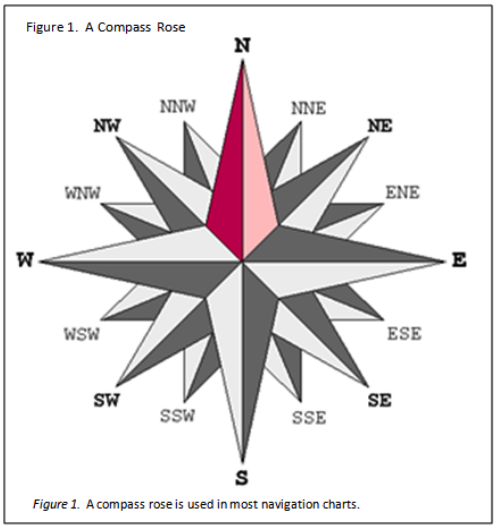
Figures

Figures include any form of visual display other than a table, such as graphs, charts, maps, drawings, and

Continued on next page

photographs (see Figure 1, for example). Before adding figures to your article, consider whether the figure is necessary. It should add substantively to your article without being redundant to the text. Also consider whether a figure is the best way to communicate your results. If deciding whether to use a graph or a table, for example, bear in mind that graphs work better than tables if you want to show the shape or patterns in your data, that is, to convey trends, relationships among elements, or exceptions and outliers (Few, 2004). Here are some guidelines on preparing figures:

- Avoid decoration and unnecessary detail figures should be simple and clear.
- Number figures consecutively with Arabic numerals.
- Make sure that all elements of the figure, such as the x-axis and y axis of a graph, are clearly labeled.
- Use a sans-serif typeface between 8 and 14 points for figure elements.
- All figures should be mentioned in the text of your article.
- Similar figures should be of about the same size and impact.
- Check the resolution of screen images for legibility.
- Avoid the use of color for manuscripts that will be published in print.
- Make sure that you have written permission for any printed or electronic materials.



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APA has a blog site with a great deal of helpful information:
http://blog.apastyle.org/apastyle/tables-and-figures/
http://blog.apastyle.org/apastyle/2011/09/best-of-the-apa-style-blog-fall-2011-edition.html

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Accessing Data with the Washington Achievement Data Explorer, A Critique and Tutorial

By Bruce Denton

While large amounts of data are available to the public on the State of Washington Office of Superintendent of Public Instruction website, it can be overwhelming to sort through, especially if you are interested in either looking at the big picture or exploring differences and similarities between schools and districts. The Center for Education Data & Research (CEDR), at University of Washington Bothell, has employed Google's motion chart technology to facilitate visualization of state achievement data over time.

The Washington Achievement Data Explorer (WADE) can be accessed via the CEDR website (http://www.cedr.us/WADE.html). It includes three components: District Comparison, District Comparison (Performance Indicators) and School Comparison (Within and Across Districts). Each component allows users to select academic indicators, demographics and district characteristics to view, as well as how to view the data. Data viewing options are line, bar and bubble charts. The CEDR website includes a video link that clearly explains how to use WADE. Controls are intuitive and changes are reflected almost instantly. While all of the charts in each component are functional, some views are more helpful than others.

District Comparison

The line chart for district comparison provides a quick method for comparing academic indicators or demographics for one or more districts and/or the state average. The chart displays the selected indicator for the selected districts, which makes it clear to read. The other two options for display may be less helpful here, unless you adjust default settings. The bar chart and bubble chart display data for all districts, with labels for selected districts. Instead of showing time along the x axis, the motion chart displays changes over time when you press the play button. While it is possible to track the districts you have selected, the quantity of lines or bubbles is distracting. To get around this, select the "Hide non-selected bubbles" link in the lower left corner of the chart.

Even when narrowed to the selected districts, the bar chart remains hard to follow, as districts may swap places as you watch. The bubble chart, however, may be of interest, as it is possible to select multiple indicators to display. Select districts of interest and be sure to hide non-selected districts. Next, select performance indicators or district characteristics to display on the x and y axes. If desired, change bubble size and color to display a district characteristic. Since demographic information is not included and the only district characteristic included is total enrollment, the bubble chart is not as helpful as it could be. While it may be interesting, the line chart communicates most effectively.

District Comparison (Performance Indicators)

The performance indicator charts allow users to select one or more districts and view total district enrollment over time, or more likely, performance on a particular assessment over time (Figure 1). Rather than displaying percentage of students passing, this chart shows how districts performed, compared to the performance predicted based on free and reduced lunch data. Positive residuals indicate that more students passed than predicted, while negative residuals indicate fewer students passed than predicted.

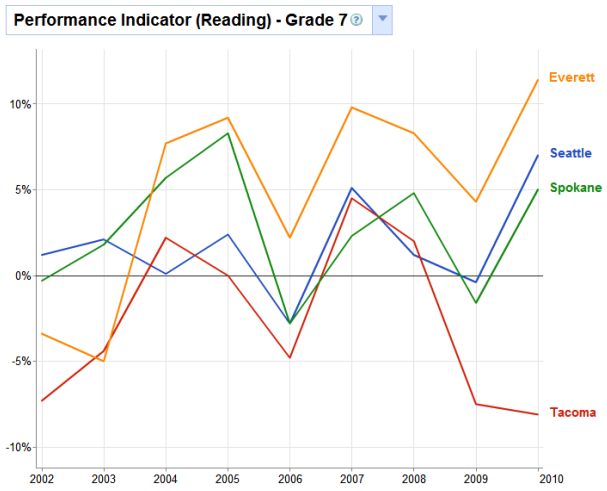

Figure 1
District Comparison (Performance Indicators)

If you are interested in clarity, the basic line chart is most helpful here. Although it is possible to select several indicators when using the bubble chart, it takes more effort to make sense of it, which seems to defeat the purpose.

School Comparison (Within and Across Districts)

The school comparison component is helpful for comparing data between schools, whether they are in the same district or not. When viewing the line chart, districts can be expanded to reveal schools, which can be selected individually. After selecting districts, select a single academic or demographic indicator. The resulting line chart may satisfy your curiosity; you also have the option of viewing details by hovering over different portions of the chart.

Continued on next page

School comparison data provide a great use for the motion bubble chart. However, when using the bubble chart, schools must be selected from the same district. Use the drop-down menu near the top of the chart to select a district. Select schools from the list on the left and select variables for both axes. I prefer to view percentage of free and reduced lunch on the horizontal axis and an academic indicator on the vertical axis. If desired, the size and color of the bubbles can represent additional data. Figure 2 displays percentage of special education students represented by color in relation to percentage of bilingual students represented by size. Pushing the play button readily displays changes in enrollment and performance over time. This is a great application of the bubble motion chart.

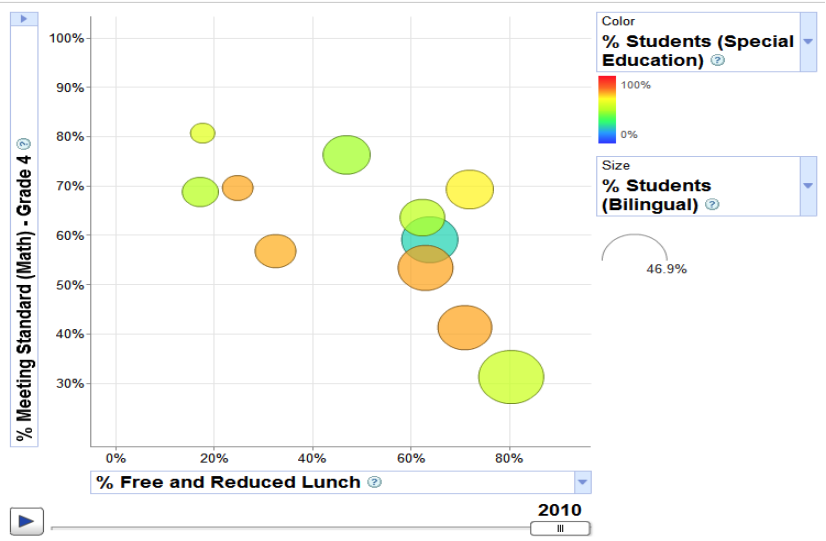

Figure 2
Motion Bubble Chart with Multiple Indicators

Discussion

Regardless of component and chart type, users should take care when making selections. While resulting visualizations may be accurate, they may not be meaningful. Fortunately, it is simple to select variables again. WADE is worth investigating, whether you are interested in seeing how your school or district compares with others, or viewing changes in multiple variables over time.

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Data Ethics: Some Questions Regarding the Use of College Admissions Test Scores as Measures of College Readiness

By Andrea Meld, Ph.D.

From an ethics standpoint, concerns about the use and misuse of test scores center around the principles of fairness to individuals and in terms of social policy, the validity of conclusions and consequences of the interpretation of test scores (Messick, 1975), and the accuracy of test scores themselves in predicting outcomes. In light of the current revision of the *Standards for Educational and Psychological Testing* (APA, AERA, NCME), this is especially timely.

Often, ACT and SAT scores are often used both as outcome measures of high school achievement and as predictors of success in college, for example, first-year college grade-point average or retention, or successful completion of college. Often it is assumed that college admission scores are so well established that the meaning of these scores is taken for granted. But not so fast, I would caution. Here are some questions to ponder that call for more in-depth research:

1. The ACT Exam – Are Two Subtests Better than Four?

   Bettinger and Pope (2011) found that the ACT English and Math scores were highly predictive of college success, while the ACT Science and Writing added little to the predictability equation. Yet it is common policy to use all four subtests as a composite score for college admissions. (http://papers.nber.org/papers/w17119).

2. The SAT Exam – Is the "New SAT" a Better Predictor than the "Old SAT?"

   The College Board (2008) reports similar patterns of under prediction for female students and racial and language minority groups (http://professionals.collegeboard.com)

3. Should Other Measures Be Used to Measure College Readiness? If So, Which Ones?

   Richard Atkinson (2009) argues that the SAT and the ACT as well, are "at war with themselves," and that the high school record is a better measure. (http://www.rca.ucsd.edu)

   The National Association for College Admissions Counseling also urges that measures besides the SAT and ACT be used for college admissions, see for example, http://www.insidehighered.com

4. English Language Learners – How Well Do College Admission Tests Predict College Performance?

   This is another area that calls for research and further questions, for example, on the use of accommodations and testing in the student's native language. Great topic for a thesis or dissertation.

I hope that this discussion has piqued some interest and critical thinking. Please send any comments or responses to the author, Andrea Meld, at andrea_meld@hotmail.com

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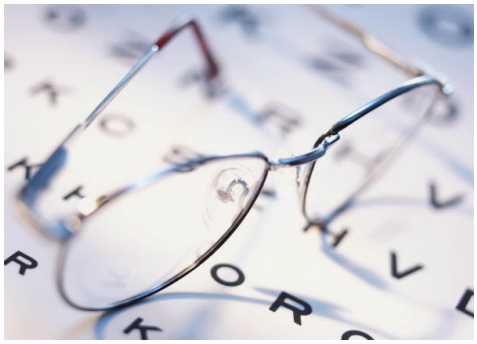
Messick, S. (1975) The Standard Problem: Meaning and Values in Measurement and Evaluation, *American Psychologist* 30, p. 955-66.

WERA Book Reviews

This issue includes two reviews of books by keynoters at the December WERA conference, both related to raising expectations about student achievement.

Donnita Hawkins, instructional specialist with North Thurston Public Schools, reviews *Teaching Students to Read Like Detectives: Comprehending, Analyzing, and Discussing Text*, a collaborative effort by keynoter Douglas Fisher with Nancy Frey, and Diane Lapp. The authors give balanced attention to methods for approaching narrative, expository, and new-media texts.

David Spencer, social studies chair at Othello High School, reviews *College and Career Ready: Helping All Students Succeed Beyond High School* by David Conley. Conley's work on preparing students for post high school success has received considerable attention from groups such as the Gates Foundation and AVID.



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College and Career Readiness: Helping All Students Succeed Beyond College by David T. Conley

Reviewed by David Spencer

In today's complex, ever changing, and increasingly competitive post-secondary world, it is imperative that educators adequately prepare students for success that transcends our classroom and surpasses the achievement of a secondary diploma. In his latest book, David T. Conley draws attention to this fact and states that "essentially all students should be capable of pursuing formal learning opportunities beyond high school". Yet if one begins to examine college remediation rates, on-time graduation rates, and the entry level career positions students are capable of attaining upon graduation, it becomes readily apparent that the modern high school is not preparing students for the rigorous expectations of either post-secondary academics or entry into the workforce. As Conley defines the problem, "today's high school diploma qualifies students only for jobs that do not require what we like to think of as a high school education." Nonetheless before we begin to evaluate our performance as a school or system, we must first develop a common understanding of what it means to be college and career ready.

Conley states that "High Schools should be considered successful in proportion to the degree to which they prepare their students to continue to learn beyond high school." Conley further defines a student's ability to learn as engagement "in formal learning in any of a wide range of settings: university and college classrooms, community college 2-yr certificate programs, apprenticeships that require formal classroom instruction as one component, and military training that is technical in nature and necessitates the ability to process information through a variety of modes developed academically such as reading, writing and mathematics." Conley feels that it is imperative that students be provided with the foundation of skills and knowledge necessary for them to make informed decisions about work and careers and the ability to move into almost any discipline.

What distinguishes Conley as a unique voice in the "great debate" between college readiness and work readiness is his emphasis on what is common to both pursuits. Conley describes a core set of knowledge and skills that all students must develop in order to achieve success beyond high school.

1. ***Key cognitive strategies*** - intentional behaviors by students that allow them to "learn, understand, retain, use, and apply" subject matter across the contents. Students must be trained to contextualize information presented; however, with the advent of high stakes, end of course exams the information presented to the students is often de-contextualized and simply fact driven.

2. ***Key content knowledge*** - the "processing (of) information and applying that information by means of the key cognitive strategies," consisting of "overarching academic skills". Skills such as reading and writing, and core academic subject knowledge in math, science, the social sciences, world languages, and the arts.

3. ***Academic behaviors (self-management)*** - the requirement of greater self-awareness, self-monitoring and self-control of a variety of "processes and behaviors necessary for academic success." Reflection, commitment to continuous improvement, and study skills are just a few of the skills exhibited by successful high school graduates.

4. ***Contextual skills and awareness (or "college knowledge")*** - the incorporation of the "privileged information necessary to understand how college operates as a system and a culture". If students do not understand the culture associated with colleges they often become estranged, exasperated, or embarrassed during their initial college experience resulting in a decision that university life is just not for them.

Attempting to change the overall culture of a district as it shifts from a view of graduation as the end toward one that focuses on college and career preparedness is a monumental task. Conley acknowledges the problematic nature of this undertaking. He believes this change to be sustainable only if there is a shared vision among the staff and community, tenacity for the work exhibited by key players, and regular opportunities to reflect and improve the process ensuring college and career readiness for all students. To break down the enormity of the task into a realistic and attainable goal, Conley spends chapters seven and eight outlining schools and states that have begun implementing these changes and seen success with their students.

While I agree with Conley's overall approach and thesis, I was left with more answers about college readiness than career readiness or typical career programs found in today's schools. Throughout the book Conley repeatedly refers to the successful "college student," making no explicit connection to the career world. As such I am left wondering if the four core areas mentioned above are truly transferable outside of the college classroom. I found no examples of students engaged in technical training, nor were we presented with success stories of students outside of the University system.

College and Career Readiness was an excellent read for our faculty book club. In fact the discussions within the

Continued on next page

group were so successful that it fostered a larger conversation with our high school staff. Our focus on the central thesis of college and career preparedness is now being discussed at the central office as well. As a system we are examining what it means to be an effective institution and redefining what success looks like in all our students.

Conley, David T. (2010) *College and Career Ready: Helping All Students Succeed Beyond High School*, John Wiley and Sons, 319 pages, hb $27.95, ISBN 978-0-470-25791-3.

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Teaching Students to Read Like Detectives: Comprehending, Analyzing, and Discussing Text by Douglas Fisher, Nancy Frey, and Diane Lapp

Reviewed by Donnita Hawkins

Teaching Students to Read Like Detectives is Fisher and Frey's fifth collaboration and their first with Lapp. The book addresses the authors' concern that many students cannot make academic connections or critically think about and evaluate text. The authors encourage teaching to deeper meaning rather than the surface level learning that the authors see as the current outcome of much reading instruction. More specifically, they propose "an instructional shift…that prepares students to investigate texts in ways that enable them to scrutinize, critically analyze, produce, and communicate information" (p.2). The authors think this shift together with a greater focus on informational text will occur with the implementation of the Common Core Standards. If, in fact, most students do read on a surface level, the focus of the new standards on deeper reading of complex text will be a significant departure from their current experience.

The authors move from setting the foundation for the importance of the shift to specific strategy examples to what reading like a detective looks like in the classroom. Chapter one emphasizes the skill of continuously returning to the text. While students may have a discussion related to the text that diverges, by having students return to the text to support thinking efferent and aesthetic connections form, which deepens background knowledge.

Chapter two takes up the skill of argumentation, teaching students to have deep discussions punctuated by a continuous return to the text for support of one's point of view. Students learn that the primary goal is not a correct answer but a strong link between one's thinking and the text. The authors offer useful frameworks for scaffolding argumentation. Chapter three begins with an introduction to basic components of literature. For experienced teachers this section may be review, but examples of real students' discussions relating to different genres at multiple grade levels are quite helpful. The rest of the chapter focuses on ways to analyze and discuss text including thinking aloud and Socratic seminar.

Chapter four shifts to an analysis of expository text. It begins with a brief, but thoughtful explanation of specific types of expository text, an important consideration with the shift to more informational text in the Common Core Standards. Typically, teachers disseminate information through lecture because of the need to cover material, but the authors propose that discussion will take information to a deeper and more authentic level. Again, the authors present helpful resources including a useful table for evaluating what structure a text uses and a checklist for selecting appropriate vocabulary. The final chapter focuses on media types such as websites. These media represent new types of text that the authors argue convincingly must be taught carefully. Without clear guidelines, students can wander about a website exploring various topics until the original text becomes lost. However, if students have a strong foundation in returning to the text to support thinking then this is less likely to be an issue. The authors include an example lesson that suggests various ways to incorporate new media.

Overall, *Teaching Students to Read Like Detectives* has some useful ideas that are expanded upon with real classroom discussions. While most of the strategies or techniques are not new, they will serve as a good reminder even to the seasoned teacher. What might be less familiar for many teachers, especially those more comfortable with literature than with informational text, is how to use these strategies with differing types of text.

Fisher, Douglas, Frey, Nancy, & Lapp, Diane. *Teaching Students to Read Like Detectives: Comprehending, Analyzing, and Discussing Text*, Solution Tree Press, 156 pages, pb $24.95, ISBN 978-1-935543-53-4.

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