PALMETTO ADMINISTRATOR

Vol. 27 South Carolina Association of School Administrators Winter 2012

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2012

Good vs. Best: Increase Learning for Every Student through Profiling

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Under the magnifying lens of school report cards, teacher accountability, NCLB, and other initiatives, the stakes are high when conversations turn to measures of student *achievement*. As we pull back the lens and broaden our view to look at our society over a longer period, we see that the stakes are even higher where real student *learning* is concerned. In today's educational climate, we face the challenge to thrive when availability of many instructional resources hinges on our schools and district's ability to demonstrate continuous improvement through increasing achievement test scores. The very survival of some schools and districts seems to hang on answering the pressing question, "how can we raise our test scores?"

As tempting as it may be, focusing on test scores is much like trying to adjust the path of an arrow in flight. As we know, it is much easier to adjust the archer's technique before the arrows release. Perhaps we are focusing too much on the arrow, and not enough on the archer. Holcomb (2008) suggested that asking the right question is a fundamental imperative if education at the classroom, school, or district level is to improve. Instead of asking, "how do I raise test scores in my building or district?" a better question to ask might be, "how do I increase student learning in my building or district?" Intuitively, educators believe that deeper understanding of how students learn combined with other measures commonly taken to prepare students for standardized testing will inevitably increase learning *and* achievement. Still, schools tend "muddle through" as best they can, completing only half of this plan. Why do we tend to teach test taking skills but not gather and use critical information about our student? Because until now, the processes involved with gathering these vital pieces of information have been so cumbersome and time-intensive, that the trade-off of instructional time has seemed at best impractical and at worst, unwise. So, the part of the solution to this challenge that schools and districts tend to omit is to commit to investing in systemic, organized steps to know each learner deeply, and then increase learning by constructing content and instruction that matches learner needs. Herein, the term "profile" is defined as both the process and product resulting from efforts made to discover and quantify each student's individual characteristics on a variety of axes relevant to maximizing her or his learning and achievement.

What Gets Overlooked Without Individual Profiling?

The short answer is, "too much!" Students are complex. Every student represents a collection of developmental, attitudinal, physiological, cognitive, and many other characteristics. Discoveries about how students think, process information, act, make decisions, and live their lives all have implications for how they learn best. When we carefully chart each student's uniqueness, we may arrive at a profile that not only represents the student's characteristics, but also clarifies the best ways to teach her or him both individually and as a member of groups. With a little diagnostic work, we can understand both the similarities among and differences between our students and how to maximize each student's learning.

Researchers and educational theorists such as Piaget (1976), Bronfenbrenner (2004), Erikson (1950), Kohlberg (1976), Sternberg (2002), Gardner (1983), and others have identified and defined many areas of development and cognition related to the teaching and learning processes where students differ from each other, even within the same classroom. Child developmental theorists, educational psychologists, and highly acclaimed educators have identified and delineated even more areas of measurable differences between children's:

- abilities to think and process information (Klahr & MacWhitney, 1998; Piaget, 1969, 1976);
- preferences for learning/instructional modalities – (Armstrong, 1993, 1994; Dunn, 1984; Gardner, 1983);
- motivations for how they relate to one another (Erikson, 1963); and
- needs for certain environmental factors that facilitate their academic success (Jensen, 2005).

Effective teachers and schools recognize, respect, and reflect these differences in their day-to-day operation and instruction. Skillful application of knowledge about a student's development coupled with thoughtful administrative oversight has great potential to increase learning and achievement within classrooms and

throughout districts. An accurate and comprehensive student profile provides teachers and administrators with information about these factors that otherwise remain unknown and unused.

Using information about students to drive planning and instruction is not a new concept. Bredekamp (1987) addressed this thought when she coined the term, 'developmentally appropriate practice.' This notion stems from a fundamental recognition that curriculum and instruction should be organized and implemented in ways that reflect and respect children's development. Tomlinson (2000) used the term 'differentiation of instruction' to characterize attempts by teachers to adjust instruction to the needs of learners. Both differentiation and developmentally appropriate practice have gained wide acceptance as "best" practices for instruction. According to these, and many other respected

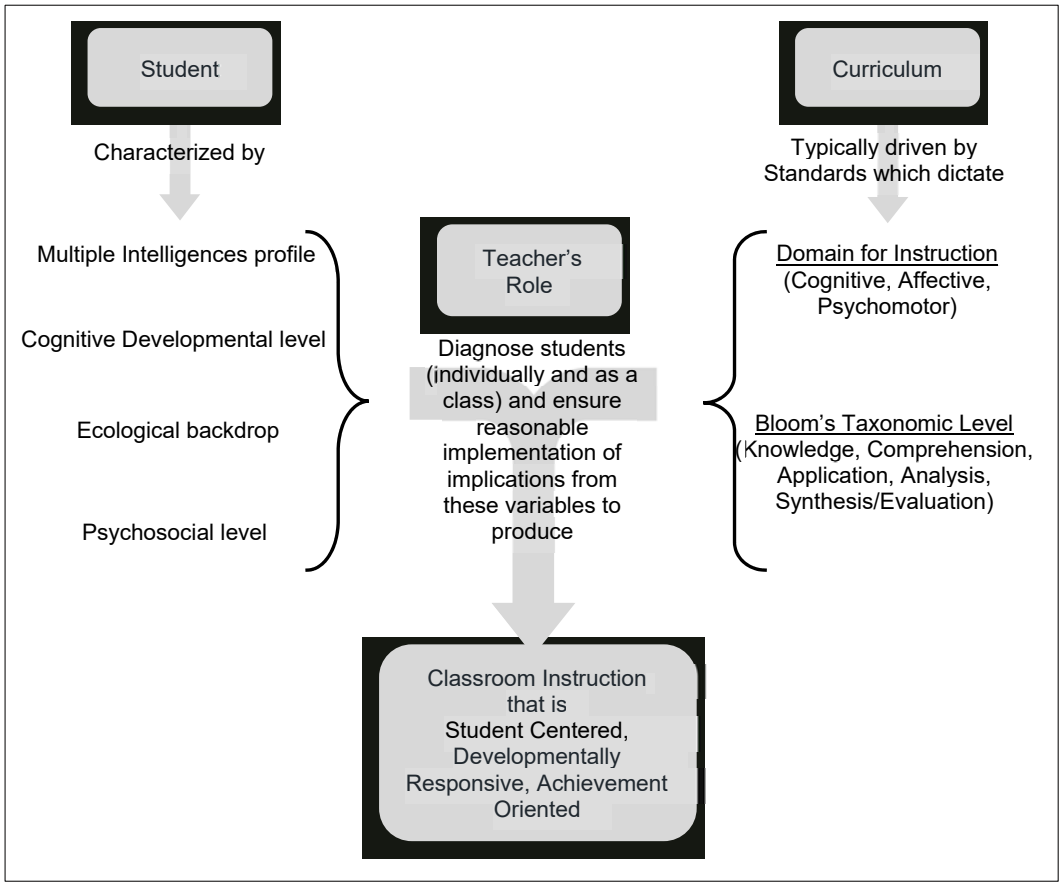

Figure 1: A Model for Balancing Classroom Instruction (Smith, 2009)

educators, the message seems clear; *in order for a school to be effective, every teacher must know every student and must teach accordingly in order to maximize student learning and achievement.*

Because we know that students are different from one another, we can also be sure that a "one-size-fits-all" instructional approach is unlikely to be the most effective way to teach them. Rather, an approach to instruction that is reflective of the proclivities and capabilities indicated by each student's instructional/developmental profile is more likely to increase student learning. Knowing a student's needs requires accurate diagnosis. Teaching accordingly requires careful analysis of the standards to be taught with an eye to matching learning goals to appropriate instruction that is based on student needs. There is good and bad news associated with this approach. The good news, presented below, is that there are data demonstrating increased student learning and achievement when teachers implement developmentally responsive instruction. As stated earlier, the bad news has been that teachers who want to know their students to this depth by developing individual profiles for each student have found they must sacrifice too much advent of recent technological advances, profiling students is no longer so time-intensive as to be out of reach.

Increased Achievement through Student Profiling

Fig. 1 depicts some important factors influencing effective classroom instruction. Note that each of the theories referenced on the left side of the graphic represent information that must be known in order for the student to be fully considered when planning instruction. The right side presents domains for content presentation and levels at which learners must understand required content. Teachers commonly include these in their planning. The final piece of the instructional puzzle is the teacher who must analyze, balance, and produce instruction that is responsive to the

combination of these classroom-based factors. Effective teachers balance the forces and factors within their control with student centered, developmentally-responsive, achievement oriented instruction as their goal. Teachers who do not consider student characteristics are not as effective as they could be. By analysing the developmental profile of the students, teachers begin to understand the parameters that must guide their instruction. By artfully combining these two sets of knowledge, the teacher may make informed decisions about instruction that will result in increased student achievement.

Figure 2: Sample Student Developmental Profile from LCAS Program *(used with permission)*

Research-Based Evidence of Increased Student Learning through Profiling

The diagnostic-prescriptive approach briefly described above was implemented in two failing schools in South Carolina with students in grades 3-6. Students in these classes completed the diagnostic activities on the Learning Curve Achievement Systems (LCAS) website (see demonstration website http://demo.increaseachievement.com). Teachers received diagnostic profile reports for each student similar to the one in Fig. 2. These reports contained information from the diagnostic instrument on the website related to each student's cognitive, and psychosocial development, information to be used to track performance and achievement gains. Also provided on each report were recommendations about research-based specific instructional approaches that represented the combination of all the measured factors. These instructional guidelines predicted increased learning for each student.

Teachers then used the information in the reports to inform their planning and instruction during the treatment period. Effectiveness of the process was measured using student gains in scores from Fall to Winter administrations of the Measures of Academic Progress (MAP) instrument; a nationally standardized and commonly used achievement test for benchmarking student academic progress in grades 2 through ten (NWEA, 2010).

Data reported here reflect the Fall and Winter administrations of the test in each school immediately preceding and following the treatment period. Actual student gains from Fall to Winter were compared with expected student gains published by the NWEA (2008.) Students completed her or his multiple intelligences profile, and test score three content sections on the MAP; mathematics, reading, and language usage. Results of these tests are reported by NWEA as both percentile and RIT scale scores. Because the RIT scale scores represent equal intervals of item difficulty, increases in scale scores represent increases in student content mastery, herein referred to as increased achievement.

Table 1 presents expected (regular font) and actual (bold font) achievement gains resulting from implementation of the diagnostic/prescriptive process

described earlier. Data were gathered from September of 2008 to January of 2009.

Data in Table 1 indicate achievement gains in all grade levels of approximately 2 to 2.5 times the expected. In addition to increased levels of content understanding and the resulting increases in achievement test scores, teachers involved in the study also reported a decrease in severe classroom management issues (that is, those resulting in disciplinary referrals) of nearly 60%. Anecdotally, these results are similar to results obtained by nearly 200 teachers in grades 2-12 who implemented this diagnostic/prescriptive approach to instruction, however, because those results were achieved using teacher-constructed assessments for which no reliability and validity information is available, those data will not be reported here.

Expected / Actual Achievement Gains in RIT Scores				
Grade	Math	Reading	Language Usage	Percent Actual Gains are of Expected Gains by Grade Level
3	5.9 / 8.8	4.7 / 11	5.4 / 11	195.63%
4	3.6 / 9.4	3.6 / 10.9	3.9 / 8	256.34%
5	4.3 / 8.7	2.9 / 7.7	3.0 / 5.6	218.17%
6	3.1 / 4.6	2.2 / 5.4	2.3 / 5	203.74%

Table 1: Achievement Increases from September 2008 to January 2009 for Grades 3-6 in Two Failing South Carolina Schools

Where to Begin: Making "Good" Practice into "Best" Practice

Results from these two schools suggest that broadbased, systemic use of instructional profiling has significant potential as a tool to initiate fundamental change in the academic landscape at the classroom, school and even district level. In order for improvement in a school or district to happen, changes must not only be systemic, but they must address fundamental needs. In the midst of the many well-conceived curriculum and instruction models available, this approach stands in a class by itself because it effectively addresses a fundamental truth about learning and teaching. That is, ultimately, learning and teaching are not about the curriculum; they are about the student.

The website referenced in the results above provides a comprehensive, scalable, interactive, and secure support system for diagnosis of students and management of best instructional practices. The barrier of time intensive and cumbersome diagnostic processes for gathering important information about every student has finally come down. To learn more about LCAS, please contact the author at doug_smith@increaseachievement.com or visit us online at http://development.increaseachievement.com.

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