The Special Education Dilemma

Solving it with fluency

By Carl Binder, Elizabeth Haughton, and Barbara Bateman

We all know fluency when we see it in a foreign language speaker. We say, "She spoke fluent Italian" when we observe a person speaking Italian smoothly, quickly, and without hesitation. It's not just about saying the correct words. It's also about achieving a useful pace or speed of performance. We have little difficulty recognizing a masterful athletic or musical performance. Carlos Santana, Chris Evert, Michael Jordan, Céline Dion, Tiger Woods, Ray Charles, Bonnie Raitt – they all have at least one thing in common: performances that are undeniably *fluent.* They all make the right moves without hesitation. They perform with the appropriate combination of accuracy plus speed (or quality plus pace). Even in people who are less well-known than these world-class performers, we recognize fluency as the hallmark of competence. Skilled computer users, mental mathematicians, or expressive readers share that combination of getting it right with ease and fluidity that characterizes all genuinely-accomplished people.

Fluency goes beyond mere accuracy to include the pace, or speed of performance. On a continuum from a total lack of measurable performance to mastery, 100% correct is only part of the way there. Since most educational assessment measures only accuracy, it cannot show any difference between accurate but struggling performance and fluent performance. Without measuring time, neither teachers nor learners can set fluency goals or precisely monitor progress toward those goals. It's no wonder, then, that students in many educational programs often fail to achieve fluency. Instead, they progress by building one non-fluent skill on top of another until the whole skill set becomes "top heavy" and falls apart. For example, when in *your* educational career did mathematics become difficult? For most people, math at some point became too unpleasant to pursue further because its foundation contained too many skills that were not fluent and were therefore difficult to apply. The result of piling too many non-fluent skills on top of one another is emotional stress, a sense of being overloaded, lack of attention span, and in extreme cases dropping out from school.

If you carefully observe children in the learning process, it is easy to understand why behavioural fluency is an essential factor in learning and performance of any kind. Both informal experience and scientific research suggest that fluency contributes directly to three types of critical learning outcomes.

- **Retention and maintenance:** the ability to perform a skill or recall knowledge long after formal learning programs have ended, without re-teaching in school year after year
- **Endurance:** the ability to maintain performance levels and attention to task for extended time periods while resisting distraction
- **Application:** the ability to combine and apply what is learned to perform more complex skills, creatively and in new situations

These are important outcomes that education is supposed to accomplish but which are sadly lacking in the long-term results of many educational programs. Parents usually see the lack of these outcomes as symptoms or problems that arise at homework time and when children try to apply what they've learned in school to life situations. Even in relatively successful students who do not falter in obvious ways, a lack of fluency in essential skills and knowledge can seriously limit their ability to achieve the full learning potential of which they are capable.

Consider the difference between a student who easily completes her homework and another student who avoids homework, completes it with difficulty, and seems unusually distractible. *The most obvious difference is a lack of fluency in the second child.* For example, on arithmetic "story problems" (dreaded by many students, teachers, and parents!), the more successful student is able to read problems rapidly and correctly, calculate answers to basic math problems quickly and accurately, and complete other parts of the problem with relative ease. The struggling student, in contrast, falters while reading the problem, performs basic math with hesitation (perhaps counting fingers to compute basic sums), and may guess which phrases (such as "how many left?") indicate specific types of calculations. When students lack fluency in the foundation skills, performance requiring application of those skills is likely to be painfully slow, difficult, and full of errors. Fluency should be an essential criterion at each step in an educational program because it allows students to progress smoothly through the learning process, building each successive layer on a previous layer of fluent prerequisite skills and knowledge.

Another way to understand the effects of fluency is that it frees up attention for higher-order application, rather than overloading attention with the mechanics of performance. Fluency in foundation skills frees attention for application, creativity, and problem-solving – the higher-order activities that make education valuable and fun. Parents usually comment that students with fluent foundation skills do their homework independently and enjoy new challenges. Teachers say that these students are a joy to teach and seem to love learning. On the other hand, when students struggle to form letters or digits, they have less attention for composition, calculation, or creativity. When they aren't fluent on basic math facts, they have a hard time paying attention to the teacher's demonstration of long division

or adding fractions. When students can't read fluently, there's little attention for remembering, comprehending, or enjoying a story or essay.

Many of these struggling students are in special education. Most will achieve fluency only with supervised and frequent practice. Too often with these students, mastery to a given level of accuracy is the only goal. When that level is reached, or even before it is reached, the student is typically moved along immediately to new, more difficult material and never achieves fluency in the most basic skills. While the amount of work required and the level of expectation both increase, the student remains mired down, slowly and painfully slogging along, falling further behind and becoming more discouraged. Completing class assignments and homework becomes an impossibility. And fluency is never achieved.

Increased emphasis in special education on helping students achieve true fluency in all foundation skills before moving ahead would benefit not only the students, but also their teachers and parents. Central to every special education student's schooling is his or her Individualized Education Program (IEP). Using fluency aims as the mandated measurable goals and objectives would greatly increase the usefulness of IEPs, making them far faster and easier to prepare and facilitating clear, honest, objective progress reporting to parents. Visible, explicit fluency aims would also lead to interventions focused on achieving essential levels of both speed and accuracy, i.e. on becoming fluent.

(Dr. Binder began his career as a doctoral student with B.F. Skinner, and spent the 1970's conducting instructional research, training and supervising teachers. During the 1980's and 1990's, he applied fluency-based training and coaching methods in corporate settings while continuing work with educators and psychologists, frequently in collaboration with Elizabeth Haughton, in whose first grade classroom he had completed portions of his doctoral dissertation. He now speaks passionately to whoever will listen about the huge potential for improving education that exists in a fluency-based approach. Ms Haughton, Director of the Haughton Learning Center, has for over 30 years provided children with individual learning success programs using the principle of fluency in basic skills and a unique measurement system called Precision Teaching. Dr. Bateman began her special education career in the 1950s, in public schools and institutions. In the mid-60's, she returned to Oregon and taught special education and special education law courses for 34 years at the University of Oregon.)

This article was excerpted with permission from "Fluency: Achieving True Mastery in the Learning Process" at www.fluency.org/Binder_Haughton_Bateman.pdf. The article includes much more information, including how to measure fluency and how to help students achieve it.)