DIRECTOR’S MESSAGE
A Closer Look at Talent Search

Like many of you, I find great satisfaction in helping gifted young people identify and build upon their strengths. For gifted children, research has shown Talent Search to be a reliable tool for facilitating this process. It’s the research behind it that has made me a huge proponent of Talent Search. The National Association for Gifted Children devoted an entire issue of their magazine Parenting for High Potential to demystifying the concept of Talent Search. I highly recommend this April/May issue, which can be accessed by visiting www.nagc.org/phpdigital.aspx and registering for a free account.

This issue of Talent unpacks the Talent Search process even further. Our feature article touches on its history, highlights recent research and offers a sneak preview into future developments within Northwestern University’s Midwest Academic Talent Search (NUMATS). Sidebars explain the value of NUMATS Talent Search statistics and compare NUMATS above-grade-level testing with the MAP testing being used with increasing frequency in schools. We introduce you to individuals impacted by Talent Search: Siddhartha Jena, an extraordinary young man working to solve the problem of cardiovascular disease, and the Landau family, three generations of passionate, accelerated learners. Talent Search can encourage students to elevate their aspirations and afford opportunities to discover and pursue dreams.

Parenting gifted children can be an amazing experience. Their bright, inquisitive minds often seem like sponges absorbing everything they encounter. Parents are often astonished at what their children know and can do. Yet, while parents can see their children growing up physically in front of their eyes, they often wonder whether and how their children are growing intellectually and academically. Parents want to know if their gifted children are on the right path to be able to pursue their long-term goals and dreams. We at Center for Talent Development know what you’re dealing with.

Recent research highlights a problem in education today as it relates to gifted children. High achievement requires both ability and productive effort. But, how do we identify what educational opportunities and approaches will help gifted children grow and achieve?

Talent Search programs, like Northwestern University’s Midwest Academic Talent Search (NUMATS), are designed to address that question. Talent Search strives to accurately identify the academic potential of gifted students, regardless of behaviors or other factors that might obscure their true abilities, and then help match them with learning opportunities that expose them to new ideas and knowledge while cultivating positive attitudes and practices that are essential for long-term achievement.

Enacting Potential: Talent as a Verb

Talent Search: Gateway to Opportunity

Talent Search is a proven process that uses above-grade-level testing to assess the abilities of gifted students, and based on results, provides individualized information and resources to help these students achieve their full potential.

In Talent Search, gifted students start by taking above-grade-level tests (tests designed for students in higher grades) to obtain a more accurate and meaningful assessment of abilities than a grade-level test allows. NUMATS, for example, uses the EXPLORE® test, normally given to students in grade 8, to determine the abilities of students in grades 3 through 6. The ACT® and SAT® tests, typically used for college admissions, are administered to students in grades 6 through 9.

While the testing experience itself can be beneficial to students and while the results

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provide valuable information, the goal of Talent Search is to help students apply what they learn about themselves toward improved performance and achievement. To achieve this goal, NUMATS helps schools and families interpret test results, guides parents in advocating for an appropriate learning environment in school with high-quality, differentiated instruction, provides personalized recommendations for course sequencing and supplemental programming, and rewards students for their achievements.

“Talent Search is a gateway to opportunity,” says Dr. Rhoda Rosen, CTD’s Associate Director. “Talent Search provides the information required to understand a student’s needs and to look for weekend, summer, and online programs and other resources needed to develop his or her talent. Talent Search is not just a test that provides more valid assessment of gifted children’s abilities; it’s a pathway to future talent development. Along the way students also gain access to scholarship programs, fellowship opportunities and more.”

Research Demonstrates the Usefulness of Talent Search

Much has been written about Talent Search in the last 40-plus years, and recent studies (e.g., Assouline & Lupkowski-Shoplik, 2012 and Brody & Mills, 2005) highlight its increasing significance. Longitudinal studies that follow the same group of students for many years, such as Lubinski et al. 2006, have shown that identifying and developing talent leads to long-lasting impact in terms of academic and career success and satisfaction.

The origin of above-grade-level testing dates back nearly a century. However, it wasn’t until the 1970s, when Julian C. Stanley of Johns Hopkins University created a model of diagnostic testing using above-grade-level testing followed by prescriptive instruction to meet the needs of advanced students, that the Talent Search concept was born.

In a literature review on above-grade-level testing published earlier this year, Dr. Russell T. Warne, assistant professor of behavioral science at Utah Valley University, notes that gifted educators have long recognized the shortfalls of grade-level standardized achievement and aptitude tests for gifted students. Years of research on Talent Search demonstrates how it addresses those shortfalls:

Raising the test ceiling. Grade-level tests are too easy for advanced students. In his review, Warne notes that children who score at the 95th percentile or higher on a grade-level test tend to obtain scores on an above-level test that would be average for students four or more years older than them. Gifted students taking grade-level tests often bump into what test designers call the “test ceiling,” which means that their abilities exceed the ability of the test to measure them. (Think of a measuring tape that is three feet long. It’s a useful tool for measuring things less than three feet in length. Yet, when you try to measure something longer than three feet, all you can tell from using the measuring tape is that the object is at least three feet. It doesn’t differentiate between objects that are 3’1”, 4 feet, 6 feet, or more.) Using above-grade-level tests designed for older students effectively “raises the ceiling” by providing items that are more challenging and that reflect more advanced content than grade-level tests, making them much more useful for evaluating gifted and advanced students’ abilities.

Making differences among high achieving students visible. Think of above-grade-level testing as a high-

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talent
Imagine two students, Jacob and Madison, who both score in the 99th percentile on their state’s grade-level standardized achievement test.

After taking an above-grade-level test through Northwestern University’s Midwest Academic Talent Search (NUMATS), Jacob and Madison receive access to the NUMATS Toolbox, which provides both test scores and comparison percentiles that paint a very different picture of their performance and educational needs.

Q: How is above-grade-level testing helpful to gifted students?
With grade-level testing, Jacob and Madison seem to have similar abilities. While both students are indeed very bright, the above-grade-level scores depict different educational needs. To realize his potential, for example, Jacob might need enrichment courses that allow him to study topics of interest more deeply. Madison, on the other hand, might benefit from moving ahead a grade or enrolling in a gifted program with an accelerated curriculum in order to fully develop her talents.

Above-grade-level test results can serve as a wake-up call. For students at the top of their class locally, it can be a surprise to see that they are at the 50th percentile compared to other gifted students their age. This information can help families and students plan an educational path that will result in their child meeting his or her future goals, whether that includes a special program at their local high school, a summer program or a selective college or university. For students who test well but don’t have corollary grades, a high score on an above-grade-level test can bolster parents’ and educators’ efforts to find proper supports and challenges to turn ability into achievement.

Q: What is the difference between NUMATS results summaries and a testing agency’s score reports?
Testing agencies derive percentiles by comparing gifted students with older students for whom the test was designed (e.g., college-bound seniors in the case of the ACT® and SAT®, and students in grade 8 with EXPLORE®). NUMATS, on the other hand, provides percentiles based on the scores of other gifted students (of similar age and grade level) who took the test. With close to 30,000 participants in our Talent Search each year, we have enough of a student pool to derive grade-level percentiles, which provide a much more meaningful comparison and more useful information on which to make educational decisions.

Q: Why are the NUMATS grade-level percentiles so important?
Most grade-level state tests are criterion-referenced, which means they measure students against agreed upon curriculum benchmarks, not against other students. Gifted students therefore learn that they’ve exceeded state expectations, but they are not able to determine how their academic performance might compare to other students nationally. Even if they also take a nationally normed test, they still will only find out how their results compare to those of students from all achievement levels.

With the NUMATS statistical summary, students are compared only with other gifted students in their grade level, which provides insight into their areas of strength. Being able to compare levels of performance also helps determine both educational needs and their eligibility for educational opportunities. Additionally, the NUMATS percentiles can provide compelling evidence to support the provision of gifted education services. Parents can advocate more effectively for their children’s needs with NUMATS results in hand.

Q: How do parents interpret the statistics and know what to do with them?
Talent Search programs like NUMATS explain the score reports in detail and make personalized recommendations to parents and teachers. NUMATS provides suggested course sequences, information about supplemental academic programs and online resources for teaching specific subject matter as well as effective learning strategies.

Our mission is to make individual strengths visible and then to illuminate the unique pathways that lead from high potential to exceptional achievement. We truly want to give meaning to those high numbers so that NUMATS students can achieve their individual goals and aspirations.

Rhoda Rosen, an associate director at Center for Talent Development, oversees Northwestern University’s Midwest Academic Talent Search. Rosen received her bachelor’s and master’s degrees from the University of the Witwatersrand in Johannesburg and a PhD from the University of Illinois at Chicago.

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powered microscope that allows parents and educators to see specific strengths and important differences that would be invisible otherwise. Research shows that test scores are more variable with above-grade-level tests than grade-level tests, enabling differences in knowledge and skill level to be detected even among the top 1% of examinees who would all appear to have the same level of ability on a grade-level assessment.

**Long-term benefit for educational planning.** Several studies support the idea that above-level test scores can be interpreted in the same way for gifted students in the middle grades as they are for high school students — the population for whom the test was designed. Therefore, above-grade-level testing can also be a valuable way to see whether students are on track for success when they reach these higher grade levels, help predict if students would benefit from accelerated learning opportunities, and chart students’ progress over time with annual assessment. Talent Search programs help identify appropriate in-school curriculum and connect students and families to specific programs and services (including scholarships, grant opportunities and supplemental programs) that develop talent beyond the school day.

**NUMATS Reflects on Past, Present and Future**
Researchers continue to assess Talent Search, and its participants, with an eye to improving its effectiveness in helping students succeed. “We’ve learned so much in the last 40 years,” Rosen says. “And now we’re standing on the threshold of a new era in which, thanks to online delivery, we can give parents and educators much more precise and personalized information about students’ abilities and how they might develop their talent.”

NUMATS recently launched an online toolbox, a password-protected site that provides 30,000 registrants each year with test preparation materials and individual test scores as well as the following:

- **Long-Range Academic Plan,** an online record of the student’s scores with suggestions for selecting appropriate coursework and extracurricular activities in math, science, social science and the humanities
- **Statistical Summary** showing EXPLORE, ACT and SAT score distributions, including percentile rankings, for NUMATS test-takers (see the sidebar on the Statistical Summary also in this edition of Talent)
- Instructional resources for use at home and in the classroom
- Current articles on parenting gifted students.

Rosen says the NUMATS statistical summary and the toolbox overall can be life-changing for students and parents. “Parents often think, ‘I have an A student. That is good enough.’ It’s only when they realize how much above ‘good enough’ their child is that they realize there is work to be done to support their child’s gifts,” Rosen says. “Talent doesn’t develop on its own. Talent development is an active, intentional process. We are learning that potential is fully developed only when young people have a clear sense of their goals and strengths, action plans for growth, access to the right kinds of opportunities and ties to supportive communities.”

To further capitalize on technological progress and strengthen NUMATS efforts in talent development, Eric Calvert EdD,
Many schools have begun to use a computerized adaptive test, called Measures of Academic Progress (MAP), to gauge student learning in reading, math and science. MAP assessments are given to all students, and they are particularly good at identifying grade-level skill deficits and in providing an indication as to whether a student is achieving beyond grade level. However, gifted students need more than MAP to get an accurate assessment of the full extent of their abilities. Likewise the teachers and parents of gifted students need more than MAP to truly understand a gifted student’s strengths and weaknesses and foster his/her development.

Above-grade-level assessments and follow-up resources offered through talent searches, like Northwestern University’s Midwest Academic Talent Search (NUMATS), meet these needs for the following three reasons:

1. Only NUMATS provides an accurate norming group (comparison group) for gifted students.

A norming group is a reference group used to compare scores against similar others. Norming groups add meaning to and enable interpretation of a raw test score.

NUMATS norms are calculated from the scores of other gifted students by grade level, as opposed to MAP norms, which are compiled from students at all achievement levels. An accurate norming group is critical for understanding a student’s academic level and providing the right type and amount of academic services to support a student’s development.

Since NUMATS norms compare similar students, the data is more useful in assessing their performance and can lead to more opportunities better suited to a particular student’s needs.

2. NUMATS is a true, above-grade-level test.

MAP has a fixed scale across grade levels and is adaptive, meaning the test increases or decreases in difficulty based on the accuracy of a student’s answers. For this reason, MAP is often mistaken for an above-grade-level test. It falls short as an above-grade-level test for gifted students, though, for the following reasons:

   a. MAP’s ceiling of difficulty and question differentiation is lower than that of tests offered through NUMATS. Although MAP is adaptive and differentiates the difficulty of items to a degree, no adaptive test can measure the depth of a gifted student’s abilities without a sufficient number of challenging questions in the item bank. Because NUMATS tests are true above-grade-level tests, they remove this “ceiling effect,” resulting in a more valid and reliable measure.

   b. Only NUMATS tests, such as the ACT® and SAT®, are specifically designed to assess college-readiness, meaning students are assessed on higher-level material. For gifted students, more challenging items lead to more accurate results. Further, unlike MAP, which is designed to assess mastery of state K-12 academic content standards and the Common Core State Standards, the ACT and SAT are designed specifically to predict success in college. This is why most colleges and universities require an ACT or SAT score in their admissions applications. (For more on the value and limitations of the Common Core Standards from a talented learner perspective, see the article by Penny Kolloff in the Summer 2012 issue of Talent.)

3. Only NUMATS specializes in providing resources and opportunities specifically designed for gifted students and their families.

NUMATS participants (and their parents and educators) receive access to an online toolbox that is like a treasure chest tailor-made for each student. The NUMATS Toolbox features a short- and long-term academic plan as well as recommendations for enrichment and/or acceleration, all based on each student’s individual test scores.

You could spend hours surfing the Internet for gifted programs and articles, only to spend more time deciphering their legitimacy and value. Or you can spend seconds logging into the NUMATS Toolbox and have access to programs and articles already vetted by experts.
How can taking a test jumpstart a career? For Siddhartha Jena, above-grade-level testing through Northwestern University’s Midwest Academic Talent Search (NUMATS) opened doors that set him on the path to high-level scientific research at a young age. Jena spent three years during high school studying the effect of lipid disorder in a college laboratory. His research led to two novel potential candidates for cardiovascular drugs. Today, he is a Davidson Institute Fellow and a freshman at Harvard University majoring in chemistry and physics.

Jena reflects on his NUMATS experience and the questions he and other gifted students have faced regarding the opportunity.

Should I participate in NUMATS? I decided to take the ACT® after completing grade 8 to see how prepared I was for the test in high school. At that time, I didn’t really know what NUMATS was, let alone its purpose. If I had taken the ACT on my own, I would only have learned how I compared to college-bound seniors. But, because NUMATS told me where I stood in relation to other gifted students my age, I learned that I had scored very highly in comparison to my peers. This was really one of the catalysts for my academic experiences in high school.

I scored well. Now what? After taking the test, I received tailored academic recommendations from NUMATS, as did my teachers. As a result, I was given the opportunity to take Advanced Placement® Chemistry when I entered high school. I already had a passion for science and scientific inquiry, and this class shaped my interests further. I was fortunate enough to have a wonderful teacher who encouraged my incessant questions and even stayed after class to discuss topics with me in further detail.

My success in AP Chemistry in grade 9 inspired me to pursue scientific research at a local university. Applying what I was learning in the classroom to questions in biology and chemistry subsequently led to my dream of becoming a research scientist.

former Assistant Director of Education for the Ohio Department of Education’s Office for Exceptional Children, joined the NUMATS team this fall. With expertise in gifted education and technology, Calvert’s charge is to lead NUMATS into the next iteration of online tools and community. Potential developments include e-Folios of milestones and achievements as well as social networking opportunities with like-minded kids around topics of interest.

“We think talent development needs something analogous to a GPS navigation system, which determines where you are and then helps plot a path to where you want to be. Like a GPS system, NUMATS starts by pinpointing where students are on their talent development journey. Our vision is to combine accurate assessment with an increasingly powerful and customized set of tools designed to help students stay motivated, challenged and connected. We want to help students articulate their goals and dreams and then create a personalized action plan, a system for charting their progress, and a supportive online community, for achieving those goals. Because talent does not develop in a vacuum, gifted students need to be connected with programs and people that can nurture and challenge them. These are precisely the people we can’t afford to neglect, for they are the people who, if supported, can change the planet, cure diseases and improve the way we live.”

A sweet little girl sits at a table playing with blocks, drawing pictures and smiling shyly if you ask about her creations. Watching her, you would think she is a well-behaved but typical preschooler. When she responds to your questions, though, the specificity in her answers conveys an atypical mind.

At age four, she is reading material targeted to students in grades 4 through 8. When she reads aloud, she scans the page for punctuation so that she can read with expression. When learning, the little girl’s eyes light up.

It came as no surprise to Victoria Landau when her daughter began to read at age two-and-a-half. After all, she had done the same. It wasn’t until Victoria was 10, though, when she took her first above-grade-level test and began participating in Center for Talent Development (CTD) programs, that she found her intellectual home. Victoria participated in the Summer Program for six years and then served two more as a teacher’s aide. Her mother, Dr. Marsha Landau, says, “Those three weeks each summer sustained Victoria the whole school year.”

Given the opportunities that testing and assessment afforded her, Victoria was quick to have her daughter tested early. She made an appointment for PreK through grade 3 assessment through CTD and will pursue testing through NUMATS once her daughter reaches grade 3, the level at which NUMATS begins. The test results alleviated many of Victoria’s parenting worries, brought on by preschool teachers who recommended occupational therapy and said her daughter didn’t relate well with her classmates. “That was the hardest part,” says Victoria. “Now that she has taken the test, it’s much easier. We understand what we’re dealing with. There’s a cascade of parental responsibilities that follow, but I’m not going to worry about those other labels that were misapplied.”

Growing up, Victoria participated in the CTD Summer Program and it was the only program offered at the time. Victoria and Dr. Landau are excited by the year-round opportunities that CTD offers today. Victoria has enrolled her daughter in a Saturday Enrichment Program (SEP) course in physics this fall and plans to continue involvement with CTD as long as her daughter wishes.

Dr. Landau approves of this plan. “The goal is for my granddaughter to have a steady, comfortable, familiar place that will be part of her life as long as possible,” she says.

As a former teacher in multiple CTD programs and as a parent workshop presenter in SEP currently, Dr. Landau knows that CTD can be a safe haven for talented young kids. “I hear from a lot of parents about their school experiences and the frustrations and difficulties they face daily,” Landau says. “I see how much gratitude they have that there is a program in the area where their kids can go and be happy learners.”

This fall, Landau’s granddaughter is among them!
Northwestern University’s Midwest Academic Talent Search (NUMATS) gives students in grades 3 through 9 access to tests ordinarily used for high school placement (EXPLORE®) and college entrance (ACT® & SAT®) to help them demonstrate their academic abilities. After registering, the NUMATS Toolbox provides extensive information and resources for families and educators.

Register by:
Oct. 9 to take EXPLORE® on Nov. 10
Oct. 29 to take the SAT® on Dec. 1
Oct. 30 to take the ACT® on Dec. 8

Accelerated Weekend Experience (AWE) programs for students in grades 5 through 8 are offered in several locations. Explore fascinating topics in science, technology or engineering with an expert in the field.

Gifted LearningLinks (GLL) credit bearing Honors, Honors Elective and AP® courses begin on the 15th of every month. Nine-week winter session of online enrichment courses for students in K through grade 8 starts on January 15.

Fall Conference: Educators are invited to register now for the CTD Fall Conference on Saturday, October 13 in Evanston. Dr. Joyce VanTassel-Baska, Professor Emerita at College of William & Mary will discuss Common Core State Standards.

Upcoming State Gifted Conferences:
Wisconsin Association for Talented and Gifted, October 11-12, 2012 in Sheboygan, WI.
Ohio Association for Gifted Children, October 14-16, 2012 in Columbus, OH.
Minnesota Council for the Gifted and Talented, November 10, 2012 in Minneapolis, MN.
National Association for Gifted Children, November 15-18, 2012 in Denver, CO.
Indiana Association for the Gifted, December 10, 2012 in Indianapolis, IN.
Illinois Association for Gifted Children, February 10-12, 2013 in Naperville, IL.

Center for Talent Development has been accredited as a nonpublic supplementary school by the North Central Association Commission on Accreditation and School Improvement (NCA CASI) since April 1, 1994. NCA CASI is recognized by the U.S. Department of Education and has more than 100 years of experience in improving educational quality.

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