



Center for Talent Development
Northwestern University
School of Education and Social Policy

Talent

Summer 2013



NORTHWESTERN
UNIVERSITY

Director's Message

The Three P's

Potential. Passion. Persistence. As this issue came together, these themes emerged.

First, we talked with David Lubinski, Vanderbilt University professor, and were encouraged by his research showing that potential (e.g., exceptional verbal, mathematical and spatial abilities) in youth is predictive of creative achievement in adulthood. Center for Talent Development's mission is to identify and cultivate exceptional ability and potential. We always like to hear new research proving that our work makes a difference.



We also talked with three alumni of CTD programs at various stages of their careers in writing, technology and entrepreneurship. Each was identified at a young age as having great potential. Each has found and pursued a passion, and all three have persisted despite setbacks, naysayers, false starts and other barriers. As they have persevered in their chosen endeavors, they have each found success.

It is a privilege to work with the gifted community – students, parents and educators alike. In the same way that Kevin Wang, one of our profiled alumni, was inspired by working with the top entrepreneurs in the world, we at CTD are inspired daily by the talent we witness around us.

This summer, as you take a break from the three R's, think about the three P's. What is your focus for the year ahead? Whether you want to assess potential, find or delve into a passion or need support to persist through uncertainty, fear or other obstacles, CTD can help.

Paula Olszewski-Kubilius

New Research Supports Above-Level Testing and Gifted Programming

Above-grade-level testing is not just an accurate assessment of current ability; it's a valid predictor of future professional achievement and creative output.

So finds David Lubinski, Vanderbilt University professor, and his colleagues in an article, "Who Rises to the Top? Early Indicators," published in a spring 2013 issue of *Psychological Science*.

Lubinski's research focused on profoundly gifted individuals. Study participants had been identified at age 12 through above-level testing procedures, such as those used by Northwestern University's Midwest Academic Talent Search (NUMATS). Through NUMATS, gifted students can take tests including EXPLORE®, ACT® and SAT® at earlier grade levels than they are designed to be administered. Taking tests developed for older students provides a more accurate measure of ability than that gained from standard grade-level achievement tests.

Researchers tracked the study participants, students with exceptional above-level test scores, for nearly three decades. Results showed that participants' relative strengths at age 12 were predictive of the area in which they excelled 35 years later and the scores were indeed early indicators of professional achievement. By age 38, participants had worked for an impressive



array of high caliber organizations and had distinguished themselves time and again with patents obtained, creative works produced, and awards received.

Center for Talent Development talked with Lubinski about his research.

You've spent decades researching exceptional human potential. What are your findings?

Our research shows that we can differentiate developmental trajectories at an early age, especially if spatial ability is tested alongside verbal and mathematical ability. It also underscores the extent to which we're not adequately assessing our most able youth. Our study participants were tested at age 12, and many of them were already bumping their heads on the ceilings of the indicators.

In an article published by *Psychological Science* online in July, we explored the intellectual architecture of creative thought. The research shows that verbal, mathematical and spatial abilities are all relevant.

Why is above-level testing so important?

When kids take grade-level standardized achievement tests, gifted students are the ones with high, flat profiles. A lot of people look at that and say, "Oh, you can do any-



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New Research

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thing.” That’s just not helpful. We need above-level testing to differentiate strengths from relative weaknesses and to assess the able from the exceptionally able.

Isn't it enough to know a student is in the top 1% nationally?

No. A lot of people — even psychologists — don't realize this. They think about the top 1% as a category. But actually, the top 1% has over 1/3 of the IQ range in it. IQs in the top 1% begin around 137, but IQs go beyond 200. Our research shows that there is a lot of psychological significance in the differences in the top 1% — not only in the level of ability, but in the intensity of abilities as well.

What is the value of spatial ability assessment?

Spatial ability refines the prediction of developmental trajectories. What really differentiates the engineers and humanists, for example, is spatial ability. We looked at creative accomplishments in four areas: patents and refereed articles in STEM, biomedicine, humanities or law. Those creative outcomes, 35 years later, have very different intellectual profiles at age 12.

How do you hope educators and parents respond to your research?

Our hope is that parents and educators will identify students' true abilities and needs and ensure they are challenged and supported in growing those abilities.

To the extent that kids are intellectually exceptional, typical school systems don't meet their intellectual needs. This is increasing exponentially in modern times with the advent of the Internet. With Harvard and MIT mathematics courses available online, kids show up to high school already knowing

the math curriculum for the next four years. Likewise, spatially gifted kids like to work with gadgets and like to transform material. They like to tinker. Without proper assessment, they don't get opportunities to experience courses in robotics, engineering or the physical sciences at the level of sophistication they need for their optimal development.

What happens when kids aren't appropriately assessed?

At best, they will be bored. Julian Stanley, founder of the Study for Mathematically Precocious Youth (SMPY), which I now co-direct, always said this, "Teach children only what they don't already know." He also added that, "Every kid has the right to learn something new every day." That just makes sense.

Fundamentally, you should do with intellectually precocious kids what you do with all kids. Find out what curriculum they have mastered. Structure the curriculum at that level and at a rate and pace that is commensurate with their learning. It's called appropriate developmental placement. We do this in music and athletics; why not academics?

Currently, each grade's curriculum is based on an average. We would never base buying shoes for kids on an average. We measure a child's foot and adjust the shoe size. That's exactly what we need to do for curriculum. Finding out where kids are is something we've done for years with kids who have developmental delays. We assess where they are in terms of their learning, and we adjust the curriculum. The same needs to be done at the upper end of the distribution.

What are the key takeaways from your research?

Overall, we've found that interventions matter.

1. It's important to help kids find their passion. Our research shows that it's not that, after a certain ability level, all careers are open. People tend to gravitate to their area of strength, and then opportunity and commitment take over. We all need to attain minimal requirements in language and quantitative reasoning, but that doesn't mean a person can't excel in one area.

2. Giving kids access to advanced curriculum and a supportive community is essential. We've learned a lot about how gifted kids thrive by being with intellectual peers. If you're a 7th grade female who is mathematically gifted, but your agenda at school is to fit in, you're not very comfortable. This same individual could come to a summer residential program with like-minded students and thrive.

Professor Lubinski's research interests include psychological measurement and the assessment of individual differences in human behavior. He co-directs the Study of Mathematically Precocious Youth (SMPY). ●



CTD Staff Member Authors New Book

Ann Gadzikowski, Summer Program Coordinator, Early Childhood Programs for CTD, recently released a new book titled **Challenging Exceptionally Bright Children in Early Childhood Classrooms**. The content increases educator and parent understanding of what it means to be exceptionally bright in preschool and pre-kindergarten. Gadzikowski presents strategies for teachers to help such children reach full potential. She explores approaches that involve differentiation, conversation and connections. The book is currently available through RedLeaf Press.



NUMATS 2014

The start of the school year is an opportune time to take stock of academic interests, identify strengths and set learning goals. Northwestern University's Midwest Academic Talent Search provides research-based assessment and helps to match students with learning opportunities that expose them to new ideas, knowledge and experiences. As presented in this issue of *Talent* the results of above-grade-level testing offered through NUMATS accurately assess current ability, and are a valid predictor of future professional achievement and creative output. They play a vital role in academic planning for gifted students. Annual participation in NUMATS also offers parents and educators an effective means of tracking academic growth from year to year. Online registration for fall tests opens in August. Visit www.ctd.northwestern.edu/numats for more information.

Alumni Profiles: Finding Passion, Following Pathways

The development of exceptional talent happens in stages, and there are myriad pathways one can take. Three CTD alumni, at different points in their talent development journeys, share their experiences and highlight pivotal moments along the way.



Calista Benson-Williams, Writer

Calista Benson-Williams is celebrating two accomplishments this summer: completing grade 6 and her first novel. Her biggest failure, she says, are all the novels she started but never finished.

Those “failures” taught her a great lesson, though. “I’ve learned to think about what I’m doing before I start writing and to stay with it,” she says.

Pursuing knowledge of all kinds is Benson-Williams’ passion. Benson-Williams participates in CTD’s Project EXCITE, a collaborative program with Evanston/Skokie, IL School District that has allowed Benson-Williams to take numerous enrichment courses. She loves the opportunity to study subjects in depth.

“In school, I can only learn so much because there are other subjects to study,” she says. “For example, I didn’t study algebra in school last year, but in EXCITE, I learned how to solve for x in all kinds of situations.”

As she looks to the future, she hopes to pass on her love for learning. “I want to take elementary education and psychology in college so I can be an author and a teacher.”



Kevin Wang, Entrepreneur

From a young age, Kevin Wang has liked to build things. At age nine, he was focused on building games.

Today, at age 18, he is building companies, and he was recently awarded a Thiel Fellowship, which includes a \$100,000 grant and two years of mentoring as he pursues the development of his company, TL;DR Legal.

TL;DR stands for “too long; didn’t read.” With this startup, Wang hopes to provide information and Web-based tools that make software license agreements easier to understand and decrease intellectual property legal battles.

Growing up, Wang participated in Northwestern University’s Midwest Academic Talent Search, then CTD Saturday Enrichment Program courses. “CTD programs attract some pretty brilliant kids. The courses challenged me and provided a great environment for people to learn from each other.”

As a high school student, Wang was influenced by business competition judges.

“They were top entrepreneurs who built companies worth hundreds of millions of dollars, and I had the opportunity to get their advice. It was really inspiring,” Wang says.

Above titles and fellowships, Wang is most proud of accomplishing things that others told him he could never do. “It’s hard to be a kid trying to prove yourself in the world,” Wang says. “I’ve always fought this barrier created by my age. My advice is to do what you’re passionate about. Passion can help you overcome any barrier.”

Jay Budzik, Chief Technology Officer

Jay Budzik is Chief Technology Officer with Perfect Market, a

leading provider of digital publishing software solutions for driving traffic, engagement and revenue. More importantly to him, he is a husband and a new dad.

Budzik’s goal as a father is to help his son “keep that positive feeling associated with exploration and discovery.”

Budzik will serve as a good role model. “I have a great time today in my job, because I love figuring new things out and getting to the next set of ideas and results.”

Persisting in the discovery process, Budzik says, has been the key to his success. “First, you build something. Then, you rethink what you’re doing and try again,” he says.

“Professionally, my biggest accomplishment has been persisting with this idea that we should be able to link information together more ubiquitously,” Budzik adds. “I tried a few different ways of doing this as a business. Now, it’s really working. We’re reaching 135 million people a month.”

“I still remember my probability and statistics CTD Saturday Enrichment Program course,” he says. “Now, I do statistics every day,” Budzik adds. “I think CTD set me up with a more intuitive understanding of math.”

Jay Budzik’s mother recently discovered a CTD assessment of her son when he was only eight years old. The results showed Budzik as two grade levels above his age-level placement at the time. “I ended up skipping 7th grade and then finishing college in three years,” says Budzik. “The end result was exactly what CTD predicted.” ●





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NEWS, DATES & OTHER IMPORTANT CTD INFORMATION

Northwestern University's Midwest Academic Talent Search (NUMATS) provides research-based assessments to identify exceptional academic ability and tailored resources to develop talent areas. Registration for the 2013-2014 school year opens in August.

Weekend Enrichment Programs engage students age 4 through grade 9 in hands-on, in-depth activities. The wide variety of advanced and unique courses range in duration from a single weekend to eight consecutive Saturdays.

- The **Saturday Enrichment Program** Fall Session begins on October 5 in locations throughout the Chicago area.
- **Accelerated Weekend Experience** programs explore topics in science, technology or engineering with an expert in the field. Sessions are offered in locations throughout the Midwest.

Gifted LearningLinks (GLL) offers rigorous online courses for all ages. Nine-week enrichment courses for students in

K through grade 8 start on September 15. Credit bearing honors, honors elective and AP® courses begin on the 15th of every month.

CTD Educators Conference: Educators are invited to attend the CTD Conference on Saturday, January 25 in Evanston, IL. **Dr. Shelagh Gallagher**, a nationally recognized expert in gifted education and curriculum development, will focus on problem-based learning.

Upcoming State Gifted Conferences:

Ohio Association for Gifted Children, September 22-24, 2013 in Columbus. More information: www.oagc.com.

Wisconsin Association for Talented & Gifted, October 10-11, 2013 in Wisconsin Dells. More information: www.watg.org.

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