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Note: This is the accessible format version of the Midwest Explorer, a quarterly newsletter of the Midwest Alliance. If you have any questions or comments related to the accessibility of this document, please do not hesitate to contact Dan Nordstrom, Outreach Coordinator, at dnordstrom@wisc.edu (by email) or at 608-890-0992 (by phone or TTY).

PI's Corner

This issue of the *Midwest Explorer* shares much with the start of a new school year and all its possibilities. In particular, the outcomes from two activities the Midwest Alliance developed and hosted this summer, the National Workshop on Students with Psychiatric Disabilities and STEM and our immersion camp "Exploration by Design: How Stuff Works," have inspired new directions in our work to encourage and support students with disabilities in STEM.

The National Workshop was both informative and energizing. Clearly, we have much to do if students with psychiatric disabilities are to thrive in STEM. However, evidence supports specific interventions that can result in student success. As an outcome from the Workshop, we are setting up a weblog with related information as well as possible strategies and interventions. Watch for more about the weblog in future issues of the *Midwest Explorer*.

As one of the planners, curriculum developers and instructors for the design immersion camp, it's no exaggeration to say that it was a watershed experience for me, causing me to ponder this simple question: "Given that design as it is currently taught is essentially a social activity involving teamwork, how do you effectively engage students who are challenged by social interactions?" The Midwest Alliance will be examining ways to do this as we move forward this year. Helping us do so is Michelle Priddy, our new outreach coordinator. Michelle will be a valuable team member as we explore strategies for supporting more students with psychiatric disabilities in Midwest Alliance programs and services.

I'd like to close by saying that everyone in the Midwest Alliance was saddened by the news of Bill McCarthy's death. It was a shock and a great loss. I had the pleasure of getting to know Bill through Alliance activities. My wife, Joan, and I traveled to NMSU to visit with Bill and the RASEM² group in 2008. It was the warmest of experiences and Bill became an advisor, colleague and friend to me. I will miss him.

Thanks for spending some time with us. We truly appreciate it.

Sincerely,

Jay K. Martin
Principal Investigator

Hands-On Learning at Exploration By Design: How Stuff Works

Last June, thirteen high school students and sixteen parents converged on the University of Illinois campus for Exploration By Design: How Stuff Works, a two-day camp hosted by the Midwest Alliance that used engineering design concepts to explore how everyday items operate.

Student sessions used experiential instruction to cover a variety of engineering design topics, from “float the boat” to tower building. Professors, staff and students from the University of Wisconsin-Madison’s School of Engineering, including Jay Martin, John Murphy, Sarah Witmer, Amit Nimunkar and Eamon Doherty Bernardoni, guided participants in hands-on activities, experiments and discussions to unlock the mysteries behind how everyday objects function.

The format of the instruction, chosen to give the students a taste of college-style academics,

created a paradox. While the engineering design process is inherently a social activity encompassing all things associated with "team," the young participants face a variety of social challenges. In all of the sessions, students would be required to work in groups to accomplish the assigned tasks. How would they fare in such a learning environment?

The teaching staff quickly discovered that the students liked the team concept and, consequently, were more engaged in and excited about the learning process than they may have been in a typical classroom setting. The opportunity to collaboratively explore ideas from STEM apparently sparked their interest.

"There was a broad spectrum of psychiatric disabilities, including autism, represented at the camp, and many of their parents had been told that their kids can't work on teams," said instructor Jay Martin. "But the camp's experiential learning format seemed compelling to our students."

Based on evaluations of their camp experience, all of the students had a positive experience, with everyone agreeing that they enjoyed the camp and the projects offered there. While the students indicated that they liked unlocking the mystery of how stuff works, the self discoveries they made had far more impact. Chief among them was the opportunity to socialize with like-minded peers. For many, it was the first time they had a peer group in which they felt they belonged. Several students indicated that "getting to meet people like themselves" was the best aspect of the workshop.

The discovery of STEM as viable academic and career options also seems to have made a strong impression. Seventy-eight percent of the students strongly agreed with the statements "I am interested in going to college" and "I'm interested in studying science, technology, engineering or math in college" on the post-camp survey.

The workshop included separate programming for parents. Liam Martin, one of the camp coordinators, noted that the discovery of a social network was as important for the parents as it was for the students.

"The parents are so overwhelmed," he said. "They all found it helpful to share ideas and discuss the similarity of their circumstances."

Beyond coping day-to-day with the challenges of their children's disabilities, college preparation was the top concern for parents attending the camp, according to Martin. Parent sessions addressed topics related to the sometimes challenging transition from high school to postsecondary education.

"When it comes to college, the concerns of the parents at the camp are no different than parents of kids without disabilities," said Martin. "They're worried their kids aren't prepared for what comes next."

To ease these concerns, parent sessions focused on the differences in support for students with disabilities that exist between the high school and college environments. Students pursuing postsecondary education will find self advocacy to be important to ensure they get the accommodations they need to be successful in the classroom, whereas in high school these are mandated through the IEP process. After graduation, students must request accommodations through section 504; if the institution deems them necessary, accommodations will be provided, but the quality of section 504 programs varies among institutions.

Parent feedback from the camp indicated a strong desire for more concrete instruction on self advocacy for their college-bound children.

"The most important thing I learned was that once my son leaves high school he will have to advocate for himself and self disclose his situation," commented one parent. "I can help him if he wants me to, but I won't be able to advocate for him as I have in the lower grades."

The outcomes from the camp have added urgency to the Midwest Alliance's plans to elevate the visibility of issues that students with psychiatric disabilities face in postsecondary education and the need for institutions to offer support. Approximately 37 percent of 15- to 24-year-olds have a diagnosable mental illness and 6-20 percent of college students report symptoms serious enough to need mental health services. The Midwest Alliance hypothesizes that many students are lost to postsecondary education and STEM fields due to the lack of appropriate supports.

The success of Exploration By Design and the personal and academic discoveries that surfaced from the experience will be put to good use as the Midwest Alliance moves forward. The

Alliance will host two camps next summer, one in Illinois and one in Wisconsin. Another day will be added to the format to incorporate self advocacy training, role playing of occupations in STEM and more social opportunities into the student agenda. Finally, to address the lack of information and resources for college-bound students with psychiatric disabilities in particular, the Midwest Alliance has a weblog and webinars under development.

National Workshop Takes Aim at Barriers to Success in STEM for Students with Disabilities

Despite the pervasiveness of psychiatric disabilities among young people—an estimated 37 percent of 15-24 year-olds have a diagnosable mental illness—few postsecondary institutions are adequately equipped to support these students. As a result, an astonishing 86 percent of students with psychiatric disabilities withdraw from college.

The Midwest Alliance's National Workshop on Students with Psychiatric Disabilities in STEM on June 22-23, 2009 examined issues related to this disturbing situation. The conference was designed to identify the supports that are needed at local, campus, state and national levels for students with psychiatric disabilities to be successful in STEM.

The National Workshop was attended by disability service providers, researchers in the field of psychiatric disabilities and deans and faculty who serve students in STEM fields. On the opening day, Brad Hedrick, Ph.D. and Kim Collins, Ph.D., who are both part of the Midwest Alliance staff, led sessions that assessed the state of services for students with psychiatric disabilities in STEM and strategies used at Midwest Alliance campuses and elsewhere.

In other sessions, Professor Karin Brockelman from the University of Medicine and Dentistry, New Jersey discussed her research into how students with psychiatric disabilities access services and accommodations and faculty perceptions. She was followed by Sara Helm, Coordinator of the Disability-Careers Office at the University of Tennessee, who spoke about career development, transition and employment issues for students with psychiatric disabilities.

Attendees used the information presented by workshop speakers to identify policy, fiscal and

programmatic barriers that have affected current practices in postsecondary supports for students with psychiatric disabilities and the differences between STEM and non-STEM fields.

On the workshop's second day, participants developed specific recommendations for students, school personnel and employers, and for health care policy that fully supports people with psychiatric disabilities. Finally, attendees outlined a research agenda for learning more about recruitment strategies, barriers for students and model programs for housing and psychological and medication support.

"The Midwest Alliance has always had a specific focus on students with psychiatric disabilities in STEM," noted Dr. Collins. "The workshop helped us to build partnerships with disability service providers, researchers and faculty and also helped us sharpen our goals."

More details about the outcomes and recommendations from the workshop will be posted on the Midwest Alliance website.

New Outreach Coordinator is a Natural Fit with the Midwest Alliance

Michelle Priddy, the Midwest Alliance's new outreach coordinator, comes to her position at the University of Illinois in Urbana-Champaign by way of Moose, Wyoming—a somewhat circuitous route for the Indiana native. She believes, however, that the career path to her current job makes perfect sense—a natural progression for this lifelong nature lover.

To understand her logic, it is helpful to know that Michelle spent two summers working as a naturalist in Grand Teton National Park, where she presented daily public programs. The job required that she quickly assess a constantly changing and diverse audience and tailor her programs to their needs. She also spent time answering a wide array of questions and connecting park visitors to available resources, helping them make the most out of their visit to the park.

"Now when I meet people, I can ask a few key questions to determine their needs, and we can work together to achieve their goals," she said. "That's exactly what I do with our Midwest Alliance participants and the various collaborators associated with our programs."

As outreach coordinator for the Midwest Alliance, Michelle helps promote the organization and its goal of increasing the number of students with disabilities who are successful both academically and professionally in STEM. Her duties include recruiting for Midwest Alliance mentoring, internship, and enrichment opportunities. She also plans and facilitates educational opportunities for Midwest Alliance participants and other students who receive services through

the Disability Resources and Educational Services (DRES) at the University of Illinois.

Michelle has dedicated her career to connecting people and science. She holds a bachelor of science degree in wildlife biology and earned her masters in education, curriculum and instruction, both from Purdue University. She followed her stint in the Grand Tetons with science education positions at the Life Science Education Center and EcoLab at Marian College and the Hoosier Environmental Council in Indianapolis.

At the Midwest Alliance, the self-proclaimed "nature nerd" is now dovetailing her ability to work skillfully with diverse populations with her fascination for all things pertaining to ecology, biology and other related sciences. It's no stretch for her to recruit others to share in her passion for science and to help students with disabilities become successful, both in and outside of academics. Michelle is finding her new position to be rewarding.

"I am an avid supporter of science education and efforts to increase the quantity and quality of students in the different STEM fields," she stated. "I'm privileged to be a part of the Midwest Alliance, working to increase the number of underrepresented students with disabilities who complete STEM degrees and go on to successful careers."

You can reach Michelle at mpriddy@illinois.edu.

NMSU Professor William McCarthy Established First NSF Alliance for Students with Disabilities

The Midwest Alliance lost a good friend and inspiring advocate this summer with the passing of Dr. William C. McCarthy. An accomplished civil engineering professor and administrator for New Mexico State University (NMSU) in Las Cruces, McCarthy is perhaps best known for his pioneering efforts to support students with disabilities in their pursuit of academic and career opportunities in STEM.

In 1999, McCarthy launched and served as director of the Regional Alliance for Science, Engineering, and Mathematics Squared (RASEM²) for students with disabilities, a National Science Foundation-funded program that served as the impetus for similar regional alliances in other areas of the country, including the Midwest Alliance. RASEM² serves New Mexico and West Texas and, like the Midwest Alliance, provides the means, support, and encouragement for students with disabilities to overcome the educational barriers they face in considering STEM careers.

In addition to his numerous awards and recognition for teaching excellence, McCarthy received a presidential appointment to the NSF Committee for Equal Opportunity in Science and Engineering and served as a member of the NSF Education and Human Resources Committee as a result of his work with RASEM².

Paralyzed in a car accident in 1966 when he was a senior at Las Cruces High School, McCarthy was told to abandon his dream of becoming an engineer. He elected to ignore this advice and pursued his dream and more by earning his doctoral degree from NMSU, where he subsequently served as dean of engineering, interim dean of engineering, and interim associate provost of NMSU in charge of student success and academic programs.

“Dr. McCarthy took student advising to new levels of excellence,” said NMSU Vice President and Provost Waded Cruzado. “A leader in his area of competence, he was also nationally recognized for his advocacy and commitment to people with physical disabilities, teaching us about the many contributions that people with different abilities bring to our lives.”

Adapted from an article that appeared on the New Mexico State University’s online News Center, newscenter.nusu.edu. Used with permission.

Mark Your Calendar!

Join the Midwest Alliance for informative programs for students, parents and academic personnel and other opportunities benefiting students with disabilities. Click on the links below or call for more information.

Assistive Technology Expo

November 4, 2009
Engineering Centers Building
University of Wisconsin-Madison

More information: Sarah.Lincoln@dhs.wisconsin.gov or Monica@SCI-Madison.org

Statewide Transition Conference

November 9-10, 2009
Renaissance Hotel & Convention Center
Schaumburg, IL
More information: (866) 436-7842 ext.116

Wisconsin State Superintendent's Conference on Special Education and Pupil Services Leadership Issues

November 17-18, 2009
Madison Marriott West-Middleton Hotel
Middleton, WI
More information: http://dpi.wi.gov/sped/falleader.html

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