

## Supporting post secondary learners with psychiatric disabilities in online environments

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What can be done to improve access, retention, and success for the 14% of postsecondary students with cognitive impairments taking online classes. Rather than target specific disorders, we recommend targeting impairments including, attention, perception, concentration, memory, metacognition, problem solving, and strategy selection. We recommend turning the locus of support for students with cognitive impairments 180°, addressing support for students at the instructional level rather than the institutional level, which takes the learner out of the classroom and delays support. This just-in-time approach personalizes instruction, minimizes frustration, and encourages persistence—leading to better learning and success. Work done by the Center for Applied Special Technology (CAST) in *Universal Design for Learning* provides the conceptual framework, focusing on the brain's *recognition, strategic, and affective* networks.

**Keywords** cognitive impairments; psychiatric disabilities

### 1. Introduction

Traditionally, postsecondary faculty teaches in a uniform manner. They do not accommodate for learning and psychiatric disabilities. Predominately, they use the lecture approach relying on verbal media of voice and text (Oblinger, 2004). This works for most students; however, students with disabilities are on their own to adapt to the course (Tollefson, 2003). In face-to-face classes they find help at the disability office including tutors, note takers, and separate rooms for test taking. However, these aids are temporary and lead to no change or improvement in neither teaching methods nor learning skills.

This is an important issue, because the crux of this paper turns the traditional accommodation strategy for students with special needs 180° by helping online faculty learn to integrate teaching strategies that improve retention and success for students with disabilities. It is our premise that accommodations for psychiatric disabilities must be located *within the instruction*, rather than placing the onus of finding support on students. We believe that instruction can and should be designed to be flexible enough to support diverse learners — not just the “general” student.

### 2. Need for Action

Students with psychiatric disabilities represent a rapidly growing number of higher education population struggling with coursework. The National Alliance for the Mentally Ill (2004) found that almost 27% of college students between the ages of 18 and 24 struggle with mental illnesses including depression, ADD, schizophrenia, post traumatic stress disorder, autism, Asperger's, and bipolar disorder. In fact, we have spoken with several universities offices around the nation (Blalock, 2004; Carlton, 2004; Ito, 2004; Leake, 2004; McCandless, 2005; McGill, 2004; Silva, 2004) and found that from 10% to 50% of students requesting services have psychiatric disabilities.

### 3. Growth of Online Learning

This problem is compounded by the growth of online education. This has become a significant problem in postsecondary education because of the growth of online learning opportunities — up 20% in the last year with no end in sight. Eleven percent of postsecondary students will take at least one online course in 2004 (Online Education Schools, 2004). This does not include the thousands of “blended” courses that

combine online and onsite methods. The problem is that online programs are designed for the mythical “general” school population and ignore individual differences associated with students with learning and psychiatric disabilities, and other causes of cognitive impairments (e.g., multiple sclerosis and Huntington’s disease (Huntington’s Disease Information for Families, n.d.; National MS Society, 2004)). Because current online course platforms and instructional design strategies do not address problems of cognitive impairments, students frequently fail in their attempts to complete online courses. The lack of appropriate interface flexibility, a wider choice of instructional design strategies, and specific information about how to address the needs of students with psychiatric disabilities in online courses severely limits online educational opportunities for this population of students.

For many students, online courses may be the only way to take a class not offered at their institution. Many live in rural areas where there is no accessible IHE. Local IHEs may offer limited program options in their interest area. Work schedules and family commitments compete with class times. Students with disabilities may be more comfortable working at home where they have time to make thoughtful responses in discussion forums or e-mails to faculty or other students. For students with mobility disabilities, it may be the only way they can take classes.

#### 4. Traditional Instructional Design

Traditional instructional design does not necessarily account for psychiatric disabilities. Traditionally, postsecondary faculty teaches in a uniform manner. Predominately, they use the lecture approach relying on verbal media of voice and text (Oblinger, 2004). This works for most students; however, students with disabilities are on their own to adapt to the course (Tollefson, 2003). In face-to-face classes they find help at the disability office including tutors, note takers, and separate rooms for test taking. However, these aids are temporary and lead to no change or improvement in teaching methods.

There is a need to turn traditional accommodation strategy 180° by helping online faculty learn to integrate teaching methods and strategies that improve retention and success for students with disabilities. It is our premise that accommodations for psychiatric disabilities must be located *within the instruction*, rather than placing the onus of finding support on students. We believe that instruction can and should be designed to be flexible enough to support diverse learners — not just the “general” student.

#### 5. Need for Universal Design for Learning (UDL)

Disabilities do not mean lack of intelligence or ability. First, Institutes of Higher Education (IHEs) have an ethical responsibility to meet the needs of a growing diverse postsecondary population. Second, the American with Disabilities Act of 1990 requires IHEs to make accommodations for those with disabilities. Third, improved retention and education lead those with psychiatric disabilities to become more productive and stable members of the society Kileen and O’Day (2004) found that “. . . only 27% of those with psychiatric disabilities are part of the labor force”.

*Universal Design* originated in architecture promoting the design buildings and infrastructure that improves access for everyone, not just people with special needs. For example, angled curb cuts, originally intended to ease wheelchair access, also make it easier for people with baby strollers, wheeled luggage carts, bicycles, and for walking — the benefits are universal. Those with psychiatric disabilities struggle with the same skills as the general population and need more innovative teaching methods and scaffolding to overcome the cognitive impairments associated with severe mental illness.

*Universal Design for Learning* (UDL) “. . . is a framework that can help you turn the challenges posed by high standards and increasing learner diversity into opportunities to maximize learning for every student” (Center for Applied Special Technology, 2002b). The underlying premise is that students fall along a continuum of learner differences — not just “normal” vs. disabled. Applying UDL to instructional strategies will not only help our target audience, but it will increase access for all learners (Center for Applied Special Technology, 2002a).

Applying UDL means that we design instruction with fewer barriers to learning. UDL can be implemented using a variety of means (especially in an online environment), including using digitized materials as well as print (e.g., large size text or spoken words). In this way, books that students who are physically challenged cannot hold are not limited. With digitized material, students with visual impairments can hear the same materials available to their peers. Students having trouble selecting an instructional strategy can link to section describing strategies and how to use them. Flexibility in learning methods and the use of digital technologies are central to applying the benefits of Universal Design for Learning. (See Table 1 at end of narrative.)

Rather than requiring students to go elsewhere for assistance, we must build instructional supports within the online class using UDL principles. All students should be able to find multiple options for reading and finding information, setting goals, selecting learning strategies, and monitoring progress. Critical to the success of differentiated instruction is the use of new digital technologies. Learning management systems are slowly (too slowly) becoming more sophisticated. It is easier to video record, audio record, and broadcast learning in different formats including podcasting or videocasting, over a variety of media such as computer programs, chat rooms, iPods, and cell phones.

However, the promise of these electronic-learning technologies is unrealized if we fail to provide accessible instruction to all. Faculty, course developers, and the e-learning industry give insufficient thought to pedagogical practices. These unimaginative course designs are, in part, the result of the courseware platforms used to create them (e.g., Blackboard, WebCT, eCollege). Part of the problem is that none of these groups knows how to proceed. The UDL framework provides guidelines and specific techniques for using technologies to improve online education.

## 6. UDL and brain research

Our development of innovative strategies for online learning environments takes shape around the most recent brain research and CAST's strategy of organizing the development of accessible instruction around three brain networks: recognition, strategic, and affective.

We use our *recognition network* to identify information including names, facts, numbers, etc. Our recognition networks answer the question "what". What are we learning? What information do I need? What does term "x" mean? We relate our new knowledge to our prior knowledge asking "How is this similar to what I already know?"

We use our *strategic network* to plan, to determine how we will learn, to solve problems. We learn things for a reason and that reason leads to action. We use the information that we recognize to plan an action such as taking a test, writing a paper, creating a video, solving a problem, and on and on. Another part of being strategic is engaging in metacognition to monitor and reflect on learning strategies and progress.

We use our *affective network* to engage in learning. We have emotional reactions to content, strategies, and assignments. We have preferences for different styles of presentations, e.g., a paper vs. a speech, vs. a video; preferences for ways to study: reading vs. listening vs. doing. We want to utilize our strengths while learning; to relate what we are doing to our lives.

Table 1 presents briefly our starting point for working with online instructors. It presents methods that we can integrate in immediate production of prototypes of professional development activities that help online instructors use the brains' recognition, strategic, and affective networks to provide a high quality education for students with psychiatric disabilities.

"Aren't these the features of good teaching in any environment?" "Yes." However there are two unique dynamics here. First, although the table presents a list of good teaching practices, higher education faculty focus on passing on information — not on meeting students' strengths and weaknesses. Second, the purpose of our project is to translate these practices into an online environment where online faculty have the digital supports necessary to use these practices to improve learning for students with psychiatric disabilities. A design process that focuses on recognition, strategic, and affective networks is

student centered with the intention of helping each student, disabled or not, use their strengths to learn (Rose & Myer, 2003).

## 7. The Digital Age

Sadly, though this is the digital age, we have failed to maintain that advantage in our online classes. We are stuck with cumbersome learning management systems that strive for simplicity but give up the flexibility to use new digital tools. The world is changing so fast, that these learning management systems have no ability to stay up with Flickr, YouTube, Blogs Podcasts, research aggregators like Bloglines, instant messaging, iTunesScholar, and on and on. Our students know of these and use them, yet we have not yet integrated them into our teaching.

Using digital tools is the only way that we will be able to ensure education for “all”. Our students are not “disabled” or “normal”. Rather, each learner is unique and deserves the best that we can provide. Why can’t we provide text readers, limited information display, digital examples of strategies, models of problems solving and so on with the power of the very digital systems we are using?

| Recognition Networks   |  |
|--|--|
| <b>Use multiple examples to take advantage of strengths and prior knowledge:</b> Multiple versions of content; Variety of images and illustrations; Video and animation; Graphic organizers.   | <b>Use multiple media and formats to enhance decoding of material:</b> Text-to-speech, voice recognition, text outline, digital photographs and sound; Adjustable font sizes and colors.                                       |
| <b>Highlight critical features of content to avoid failure to extract key points:</b> Color highlights in web pages; Use different kinds of software (e.g. word processing, pdf, PowerPoint, concept maps) offering different modes of presentations, limit quantity of information presented on one screen. | <b>Support the use of background knowledge to understand new material:</b> Web links to information already learned; Link students to other experts; Multimedia glossary including text and images and links to other sources. |
| Strategic Networks   |  |
| <b>Provide models of skilled performance:</b> Demonstrate and provide examples of expected quality of finished versions and target skill, use web forms to guide students through difficulty step-by-step processes, show collections of completed products.   | <b>Provide practice with scaffolding:</b> Use templates to structure assignments and projects, gradually reduce scaffolding, provide rubrics to help students self-assess their work, use cooperative learning.                |
| <b>Set goals and devise plans:</b> Ask students to think about their goals, compare student goals to exemplars or other students, ask for plans and timelines.   | <b>Foster metacognition:</b> Ask students to stop and rate progress frequently, provide examples of learning strategies and when they are used, suggest specific strategies for a specific assignment.                         |
| Affective Networks   |  |
| <b>Choice of Content and Tools:</b> Know students’ interests; Variety of content to appeal to a variety of interests in digital formats; Individualize feedback and rewards; Scaffold self-assessment.   | <b>Adjustable Support and Challenge:</b> Multiple levels of difficulty; Provide choice of learning context; Give selection of projects; Use flexible, collaborative work groups.   |

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