TEN PRACTICAL UNIVERSAL DESIGN TIPS......

These suggestions will help to eliminate unnecessary barriers to teaching and learning while maintaining academic rigor.

1. **Fluctuate instructional methods** by providing illustrations, multiple examples, graphs, and handouts
2. Give **shorter tests and exams** more frequently
3. Put **course content online**, including syllabi, notes, study guides, and PowerPoint presentations
4. Enhance lectures through using **small group discussions**, and **cooperative learning** strategies
5. Develop **guided notes** that can be posted online to keep students (and instructors) on task and aware of key concepts
6. Permit **alternative assignments** for students to demonstrate subject knowledge
7. Develop a **comprehensive syllabus** with clearly defined course policies and requirements, assignment due dates, and a clear accommodation statement
8. Offer alternative and relevant reading assignments in **electronic format**
9. **Link course concepts** by relating new information to previous concepts or using real-life examples
10. Establish and keep face-to-face and email **office hours**

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WHAT IS A UNIVERSAL DESIGN APPROACH TO LEARNING?

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There are a growing number of students entering colleges and universities across the country who have disabilities. These disabilities range from a number of physical and medical disabilities to "hidden" learning disabilities. Often, faculty members have not had experience or formal training about teaching these students. A common traditional approach to educating students with disabilities in postsecondary settings is to make changes in the basic curriculum to modify teaching methods or to provide individualized instruction. It's not hard to see that this approach can quickly become overwhelming and virtually impossible to accomplish.

Applying universal design (UD) techniques to instruction provides alternative approaches to meeting the learning needs of all students. Universal design is an educational approach for teaching all learners, regardless of diversity, through designing flexible classroom materials, using various technology tools, varying instructional/delivery methods, and manipulating digital content.

Universal design in instruction has its roots in the field of architecture. With the passage of the Americans with Disabilities Act of 1990 and its requirement that public spaces be accessible for individuals with disabilities, architects began to look for ways to change how they built structures so that people with disabilities could access them. Research in the field of universal design applications in architecture was led by the Center for Universal Design at North Carolina State University. The combination of ADA requirements and the research conducted by the Center for Universal Design, helped architects to more fully integrate accessible features into the design of buildings such as elevators, escalators, automatic doorways, and ramps or inclines. Possibly the most recognizable example of universal design in the built environment is the curb cut. Building new sidewalks with curb cuts, or adding them to existing sidewalks, were intended to ease access for people with disabilities, particularly those using wheelchairs or scooters. Quickly, it became evident that curb cuts were not only beneficial for these groups, but for many other members of society. Kids on skateboards or bicycles benefit from curb cuts as do people pulling wheeled briefcases, or those pushing children in strollers. People with injuries who use crutches and the elderly who often find it difficult to move quickly or to step up also benefit from curb cuts, in fact, more people without disabilities benefit from them than people with disabilities. The same thing happened with closed captioning for television; this innovation was developed to assure that individuals with hearing loss could still watch television. In fact, the most frequent use of closed captioning comes from spouses watching television late at night so that the other spouse's rest is not disturbed. Other common applications of closed captioning include using it in public areas like restaurants, airports, and fitness centers.

In the late 1990's the universal design approach was explored and began to be applied to instruction, particularly to instructional methods, print material design, and to the physical environment. This marked the beginning of organizations like the Center for Applied Special Technology (CAST) and for other groups within academic institutions across the country including the Universities of Washington, Wisconsin at Madison, and Connecticut. The focus was on creating new materials to use in instruction that assured

that what was accessible for some would be accessible for most. Nine guiding principles of universal design were developed to help guide instructors through the process of reducing barriers to instruction commonly faced by diverse learners, these principles are outlined in the table below.

UNIVERSAL DESIGN IS ANCHORED BY NINE GUIDING PRINCIPLES

1. **Equitable Use --** Designing useful and effective instruction for learners with diverse abilities and providing the same or equivalent means for use.

2. **Flexibility in Use --** Instruction is designed to accommodate a wide range of individual abilities.

3. **Simple and Intuitive Use --** The instructional design is straight forward and predictable regardless of the learner's experience with the material or level of concentration.

4. **Perceptible Information --** The necessary information can be transmitted regardless of the environmental conditions.

5. **Tolerance for Error --** Instruction is designed to help accommodate for varied learning pace and prerequisite skills.

6. **Low Physical Effort --** Nonessential physical effort is eliminated for learners to focus on the learning task.

7. **Size and Space for Approach and Use --** Instructional opportunities are given in an environment that is appropriate for reach and approach.

8. **A Community of Learners --** The environment favors communication and the exchange of ideas between students and instructors.

9. **Instructional Climate --** The environment is welcoming and high expectations are espoused for all.

The primary theme guiding universal design is that instruction and assessment approaches should include alternatives to make them accessible and appropriate for individuals with diverse backgrounds, varied learning approaches, abilities and disabilities. A significant result of incorporating universal design strategies in education is that all students, with or without disabilities, can benefit from the variety of employed teaching methods. A number of variations for incorporating universal design strategies into the instructional environment include methods for integrating a mixture of technologies. The use of online course systems like BlackBoard® and Web CT® are common to most colleges and universities and offer does not relinquish instructors from providing specific accommodations for students with documented disabilities; however, the need to do so may be greatly reduced. Additionally, most of the learning needs that students without disabilities have can be met though universally designed courses and materials, these groups include:

- International students/limited English speakers
- Students who learn best in a style different than the preferred teaching style of the instructor; and
- Older students.

Teaching diverse learners will always have its challenges, but integrating UD principles into courses can effectively address many of them. A number of groups have websites offering more information about UD and practical examples of how to incorporate universal design approaches into university courses; some of these groups are listed in the table below.

- **VCU Professional Development Academy --** www.students.vcu.edu/pda
  Provides information and links to information and resources at VCU for students with disabilities and faculty, and staff who work with them.

- **DO-IT: University of Washington --** www.washington.edu/doit/Faculty/
  A space for postsecondary faculty and administrators to learn about creating classroom environments and activities to maximize the learning of all students.

- **Health Sciences Faculty Education Project**
  www.healthsciencefaculty.org/
  To produce highly trained and qualified professionals, The Health Science Faculty Education Project assists faculty to provide the most effective instruction for each student's unique needs and strengths.

- **The Ohio State University Partnership --** www.osu.edu/grants/dpg/
  Featuring "Fast Facts for Faculty" about learning disabilities, legal requirements for working with students with disabilities, and appropriate accommodations.

- **Center for Applied Special Technology (CAST) --** www.cast.org
  A non-profit organization that uses technology to expand opportunities for all people, especially those with disabilities.

- **Center for Universal Design --** www.design.ncsu.edu/cud/
  Provides information and technical assistance for universal design in housing, public and commercial facilities, and related products.

PDA PROJECT REPLICATION

Beginning in 2004, the Professional Development Academy (PDA), at Virginia Commonwealth University, began replicating its efforts at Virginia Tech. The replication efforts are being directed by a partnership between the Centers for Excellence in Undergraduate Teaching (CEUT) and Academic Enrichment and Excellence (CAEE) and the Office of Services for Students with Disabilities (SSD), and the Americans with Disabilities Act (ADA) Office. Known as the Universal Design Faculty Initiative, this group worked to distribute informative publications about Universal Design across the Virginia Tech campus and organized presentations for faculty in the 2004/2005 academic year. Dr. Don Finn of the VCU Professional Development Academy delivered the first presentation hosted by this group in the fall of 2004. In this presentation, participants were introduced UD concepts and how they can benefit diverse students. In the spring 2005, Dr. Sally Scott of the University of Connecticut delivered a follow-up workshop about applying some UD concepts into the instructional setting. Both workshops were well received by those who attended.

Currently, the Universal Design Faculty Initiative group in partnership with the PDA, is exploring more ways to reach the faculty at Virginia Tech that include adapting PDA print and electronic documents, arranging for additional face-to-face trainings, and the possibility of creating online informational modules. In addition to these activities, a study group of faculty members representing various disciplines has been formed to investigate ways to practically apply UD techniques into their courses. A primary goal of the group is to further spread the word about UD instructional techniques, and best practices to their colleagues at Virginia Tech. The PDA will continue to provide technical assistance to help each of these groups make Virginia Tech a more welcoming campus for its diverse student population.

Interested in learning more about Universal Design?

The PDA offers presentations and consulting services designed to help instructors make the university learning environment more welcoming for diverse students. Workshops can be tailored to meet the specific goals and objectives of individual departments across the VCU campuses.

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