Universal Design for Learning – Creating Learning Spaces Accessible for All Learners

Yixin Zhang

Department of Educational Leadership and Instructional Technology, McNeese State University

ABSTRACT

Participants will gain knowledge of using appropriate technologies to enhance learning environments for all students including those with disabilities. The panel will concisely introduce the theory of Universal Design for Learning (UDL) and share positive experiences of a school and college of education for implementing UDL theory to create accessible environments for all students. Participants will learn a collaborative teaching/learning model between College of Education and Professional Development Partner School in utilizing Universal Design for Learning theory and principles.

Introduction

This presentation overviews a one-year project funded by the Louisiana Board of Regents “Universal Design for Learning (UDL) – A Collaborative Teaching/Learning Model between College of Education and Professional Development Partner School.” The principal investigator and co-principal investigators are from the Burton College of Education (BCoE), McNeese State University. The partner school is Oak Park Middle School, which is BCoE’s professional development school (PDS). Oak Park Middle School was established as a Professional Development School with the Burton College of Education, McNeese State University. Oak Park Middle School, a traditionally underserved middle school located in Lake Charles, Louisiana, has a diversity of students with different cultural and ethnical backgrounds (White 9.63, Black 88.9, Hispanic 0.8%, Asian 0.4% and other 0.2%). BCoE and PDS were awarded $173,238 through a one-year Education Enhancement Grant from the Louisiana Board of Regents. BCoE and PDS collaboratively initiated and implement UDL theory into practice for classroom teachers at Oak Park Middle School and faculty at BCoE. Faculty members and school teachers joined together as a team to participate in a face-to-face UDL institute and follow-up online courses and implemented the theory and practice of UDL and applications in classroom teaching.

The essential features of UDL have been formulated by the research at the Center for Applied Special Technology, CAST, a non-profit organization whose mission is to expand educational opportunities for individuals with disabilities through the development and innovative use of technology. While assistive technologies are of tremendous value, Universal Design for Learning is a model with the potential to cause fundamental changes in education for ALL students, including those with disabilities. The central premise of UDL is that a curriculum should include alternatives to make it accessible and appropriate for individuals with different backgrounds, learning styles, abilities, and disabilities in widely varied learning contexts. The CAST website provides extensive literature about Universal Design for Learning (www.cast.org).

Universal Design for Learning Model

Through this one-year collaborative teaching/learning model, both BCoE faculty and Oak Park Middle School teachers have benefited in the following areas: (a) understanding general concepts of Universal Design for Learning; (b) gaining knowledge of using appropriate technologies to create innovative learning environment to improve students’ learning for all students; (c) integrating UDL theory into curriculum to enhance the
experience of middle school students including those with disabilities to attain their full academic potentials; 
(d) acquiring practical experiences for using technologies to serve both general and special needs student 
populations. The whole project focuses on technology training and utilization using current educational research 
conceptions of Universal Design for Learning. UDL basic principles of multiple presentations, multiple 
expressions, and active engagement are made realistic through the availability of current educational 
technologies. Unique features of collaborative professional development opportunities benefit college of 
education faculty, schoolteachers, college graduate and undergraduate students, and Oak Park Middle School 
students.

The project provides several technological services to BCoE and Oak Park Middle School. Each site has been 
provided a lab with 18 new computers equipped with network services, high-speed T-1 Internet connectivity 
and a network laser printer. A multimedia projector has also been installed in each lab for presentations. The 
labs are also provided with three different types of flatbed scanners, three digital camcorders, and a digital 
camera for faculty, teachers and student to use.

Six Burton College of Education faculty from the Department of Educational Leadership and Instructional and 
Department of Teacher Education, the Project Manager of this UDL grant, and ten schoolteachers participated 
and completed the UDL online course from the Louisiana Center for Educational Technology. A total of 17 
university faculty and school teachers attended the first two-day face-to-face Bridging the Gap through 
Universal Design for Learning Institute in the fall of 2003 and 12 attended the second face-to-face Institute in 
the spring of 2004. A total of 23 college faculty members participated in three UDL re-delivery workshops in 
December 2003, and in spring semester of 2004. The majority of the faculty members were from the 
Department of Teacher Education. A total of 27 schoolteachers attended need-based training workshops. These 
teachers were sixth, seventh and eighth teachers teaching English language arts, mathematics, social science, 
science, special education and home economics. The school curriculum coordinator also participated in these 
workshops.

A variety of software related to Universal Design for Learning concepts and principles has been installed into 
each lab. There are basically three categories of software: (a) computer-aided instruction, (b) productivity 
software, and (c) instruction management software. Learning software provides opportunities for college and 
middle school students to take advantages of cutting edge technologies in learning the process. Production 
software allows faculty, teachers, and students to actively tie in UDL principles of multiple presentations, 
multiple expressions, and multiple engagements. Management software gives faculty and teachers effective 
tools in demonstrations and supervision.

Conclusion

In summary, school teachers and university faculty are able to enhance their lessons and student learning with 
the utilization of the UDL labs and the equipment provided. The project offers teachers the ability to diversify 
their lessons by incorporating the UDL concepts and the usage of the computer labs. The project provides an 
avenue for training and re-delivery of UDL principles to Oak Park Middle School teachers and BCoE faculty. 
The partnership between BCoE and Oak Park Middle School has been strengthened as a result of the 
collaborative activities through this project. Pre-service teachers also benefit by being exposed to UDL concepts 
and software before entering their career.

Preparation of this presentation was funded in part by the Louisiana Board of Regents Support Fund, grant 