



Integrating Universal Design for Learning in a Special Education Teacher Preparation Program

Tisa C. Aceves, Ignacio Higareda
 Loyola Marymount University (United States)
taceves@lmu.edu, ihigareda@lmu.edu

1. Introduction

In the United States, students with disabilities have not always been afforded the right to a free and appropriate public education. Only since 1975, through the *Education of all Handicapped Children's Act* (EAHCA, Public Law 94-142)[2] was the education of students with disabilities in the U.S. mandated by the federal government. A little more than thirty-five years have passed since this important legislation was initially established mandating for the first time the education and support of children and youth with disabilities and their families. The most recent reauthorization of this legislation (IDEIA, 2004)[3] requires that students with disabilities have greater access to the regular curriculum within general education classrooms as the most appropriate method of providing special services within the least restrictive environment (Karger, 2005)[4]. Additional federal mandates including *No Child Left Behind* (2001)[5] requires that schools and districts ensure that all children attain proficiency on state achievement standards and assessments (20 U.S.C. § 6301). These legislative and policy efforts have increasingly required schools to make the curriculum accessible (Hitchcock, Meyers, Rose, & Jackson, 2002; Karger, 2005)[6][4] fundamentally shifting the manner in which students with disabilities and those experiencing learning problems in school are educated.

One approach to making general education curriculum more accessible to diverse learners regardless of ability, learning style, language, or culture is the application of Universal Design for Learning (UDL). The current paper provides an initial overview regarding the general background and research related to Universal Design for Learning within K-12 settings, while later describing our university's integration of this framework in our special education teacher preparation program. We present data collected from our ongoing evaluation of the program and make recommendations for teacher preparation programs.

1.1 Review of UDL Literature

The framework for Universal Design for Learning had its origins within the field of architecture and design. Ronald Mace, director of the Center for Universal Design and his team at North Carolina State University developed seven guiding principles for the purpose of incorporating innovative design features for new products and the general environment (McGuire, Scott, & Shaw, 2006)[7]. The goal of their work was to make products, communication systems and the general built environment more accessible for a variety of individuals at a low cost (Bowe, 2000)[8]. Examples of this work include building curb cuts for individuals using wheelchairs, strollers, and roller skates; and closed captioning for the deaf or hard of hearing or for those in need of viewing television programs in noisy surroundings like airports. The overall concept of designing products and the environment in order to enhance general access had natural applications for the field of education.

Extending this framework specifically into the field of education, Drs. David Rose and Ann Meyer at the Center for Applied Special Technology (CAST) incorporated the UDL principles into the learning environment (Rose & Meyer, 2000)[9]. The principles for Universal Design for Learning encourage teachers to provide students with multiple means of representation, expression and engagement within the classroom. Through this framework teachers identify barriers to learning, address those barriers, and monitor student progress (Coyne, Granley, Hall, Meo, Murray & Gordon, 2006)[10]. By providing *multiple means of representation* during instruction, teachers present information in a variety of ways (e.g., film, oral presentation, experiential activities). *Multiple means of action and expression* allows teachers to differentiate the manner in which students can express or demonstrate what they have learned or what they already know. *Multiple means of engagement* encourages teachers to motivate students' learning by tapping into their individual interests and preferences. Figure 1 outlines CAST's guidelines for implementing these three UDL principles.

Figure 1. Universal Design for Learning Guidelines

Provide Multiple Means of Representation	Provide Multiple Means of Action and Expression	Provide Multiple Means of Engagement
<ul style="list-style-type: none"> - Provide options for perception - Provide options for language, mathematical expressions, and symbols - Provide options for Comprehension 	<ul style="list-style-type: none"> - Provide options for physical action - Provide options for expression and communication - Provide options for executive Functions 	<ul style="list-style-type: none"> - Provide options for recruiting interest - Providing options for sustaining effort and persistence - Provide options for self-regulation

Figure adapted from CAST (2011). *Universal design for learning guidelines version 2.0*. Wakefield, MA: Author.



Universal Design for Learning may sound to some like just good teaching practices. UDL, however, is an instructional framework that makes explicit the essential elements of good teaching practice in order to support inclusive educational experiences for students with and without disabilities. It provides a theoretical framework based on research related to how individuals learn best and in what context, while integrating relevant methods of instruction (Jimenez, Graf & Rose, 2007; Rose & Meyer, 2006)[11][12].

2. Integrating UDL into Special Education Teacher Preparation

It was clear that the framework for Universal Design for Learning had enormous potential for helping special education teachers improve the manner in which they supported and taught students with disabilities and those experiencing academic difficulties. In the fall of 2008, our special education teacher preparation program received federal funding to integrate UDL throughout our course and fieldwork experiences. This work occurred over four separate phases.

Phase I involved an extensive syllabi review and evaluation. This work coincided with our need to update and review course and program content given new state credentialing standards for special education programs in the state of California. Our faculty used this opportunity to revamp and review existing course curricula not only to ensure the integration of the new credentialing standards but also to embed content and experiences supporting UDL principles. Alumni, local stake holders (e.g., school administrators, teachers, students), and specialists in the field were recruited to assist us with this review and evaluation. Phase II involved course development, content integration, and purchasing necessary texts, materials, and technology to support the new content. Again alumni, stake holders and specialists from our local schools and communities assisted the program faculty with this work.

Phase III required ongoing professional development for faculty, university supervisors, local administrators, and master teachers involved in supporting our special education candidates. Faculty from the general education teacher training program were also invited to participate. Their involvement helped promote genuine dialogue regarding the support and instruction of diverse learners by both general and special education teachers. A series of four workshops were held at the university during the 2010-2011 academic year to train our staff and stake holders on the basics of UDL implementation, and how to identify the principles within classroom instruction. We invited trainers from the Center for Applied Special Technology to lead us in these efforts. We encouraged participants to attend all four sessions and provided materials and resources for those unable to attend a given session. Training sessions involved unpacking the principles and guidelines, viewing videotaped lessons, reviewing UDL lesson plans, and discussing the essential elements of instruction and assessment that reflected the UDL principles. The professional development provided during this phase established a foundation upon which our faculty and staff could reflect on existing practices and UDL implementation within program courses and field experiences.

Our work during Phase IV focused on supporting the previous year’s professional development. This also required program faculty to assume increased responsibility for leading UDL training and support efforts. We scheduled a series of professional learning community sessions throughout the year in order further discuss implementation efforts within courses and field supervision. Faculty and staff were provided opportunities to discuss the challenges of implementation while sharing a mutual vision for further embedding the UDL framework within the program.

As with any project, formative and summative evaluation was a major element throughout each phase. Program faculty developed several measures and tools in order to monitor our progress in implementing UDL including end of semester and end of year evaluations by candidates, supervisors, alumni, instructors and master teachers involved in the special education program. This work could not have been completed without the essential expertise and ongoing support of our part-time faculty and board members. These measures and tools include a UDL coursework plan, program syllabi, course signature assignments, instructor feedback, candidate course evaluations, a UDL lesson plan, candidate observations, and an annual program survey. Each is described in more detail in Figure 2.

Figure 2. UDL Program Measures and Tools

UDL Program Measures and Tools	Description / Purpose	Sample Items
<i>UDL Coursework Plan</i>	Program faculty developed a general, two-year course plan integrating assignments, readings, and activities reflecting UDL principles across all courses. Two anchor courses were identified in year 1 and year 2 of the program to address UDL content more deeply.	
<i>Program Syllabi</i>	Program faculty reviewed and integrated relevant UDL activities, readings and/or assignments in	Two anchor courses were identified, to provide more extensive content in the principles of UDL. These include:



	anchor and non-anchor courses as appropriate.	- Foundations in Special Education - Teaching & Assessing Students with Mild/Moderate Disabilities
<i>Signature Assignments</i>	Anchor courses include specific signature assignments reflecting key UDL principles.	
<i>Instructor Feedback</i>	Course instructors provide feedback regarding the content and structure of their courses at the end of each semester. This feedback evaluates assignments, content, and activities reflecting UDL principles.	
<i>Candidate Course Evaluation</i>	Candidates evaluate the effectiveness of their courses in covering material and preparing them for classroom practice. This feedback is obtained at the end of each semester for all courses.	- Course content provided effective evidenced based practices. - Course content and structure increased candidates' level of efficacy to implement these practices.
<i>UDL Lesson Plan</i>	Program faculty, adjunct faculty and consultants developed a new lesson plan structure reflecting UDL principles	
<i>Candidate Observation Template</i>	University supervisors evaluate candidates' implementation of UDL principles in their classroom practices with real students in the field.	- Designs instruction that removes potential barriers to learning thereby maximizing access to content - Ensures that students are engaged in learning activities. - Provides multiple pathways for students' action and expression (e.g. oral, written, performance based, using technology).
<i>Annual Program Survey</i>	Program survey is administered annually in late spring to determine how satisfied candidates, alumni, instructors, supervisors, and master teachers are with the program's implementation of essential credentialing standards and UDL competencies.	Does the program provide attention to: - Student access to general curriculum - Adaptation of curriculum materials - Differentiation of instruction

The 2010-2011 academic year was the program's first year for UDL instruction, training, and supervision with our first year candidates. At the end of this first year, we collected data from university supervisors, instructors, master teachers, and candidates. According to the Annual Program Survey in 2010-2011, 54% of candidates, instructors, master teachers and supervisors reported that the special education program provided at least "sufficient attention" to address skills and content related to UDL principles. During this academic year, university supervisors reported that 53% of intern candidates working in the schools demonstrated "acceptable performance" or better in their instruction with students in the field. These candidates were the first group to be trained and expected to use the modified UDL Lesson Plan in their instruction. These numbers were expected given candidates had not as yet completed both years of training in the two year program.

3. Final Recommendations

Our program is ending its fourth year of a five-year personnel preparation grant to integrate the Universal Design for Learning framework into the mild/moderate special education credential program. Other teacher preparation programs should be mindful of the integration of this content across courses and field experiences rather than rely on single courses to provide necessary instructional training and support for candidates. Programs should also plan for multiple ways of retraining faculty and staff beyond initial professional development activities and create ongoing opportunities for those individuals to refine their understanding and practice of UDL in courses and candidate supervision.

References

- [1] Rose, D. H. & Meyer, A. (2002). Teaching every student in the digital age: Universal design for learning. Alexandria, VA: ASCD.
- [2] Education of All Handicapped Children Act. Public Law 94-142. (1975).
- [3] Individuals with Disabilities Education Improvement Act of 2004, P. L. No. 108-446, 118 Stat. 2647 (2004) (amending 20 U.S.C. §§ 1400 et seq.).



- [4] Karger, J. (2005). *Access to the general education curriculum for students with disabilities: a discussion of the interrelationship between IDEA04 and NCLB*. Wakefield, MA: National Center on Accessing the General Curriculum. Retrieved May 15, 2007, http://www.cast.org/publications/ncac/ncac_discussion2004. Html
- [5] *No Child Left Behind Act, 20 U.S.C. §§ 6301*
- [6] Hitchcock, C., Meyer, A., Rose, D., & Jackson, R. (2002). Providing new access to the general curriculum: Universal Design for Learning. *Teaching Exceptional Children*, 35, 8-17.
- [7] McGuire, J. M., Scott, S. S., & Shaw, S. F. (2006). Universal design and its application in educational environments. *Remedial and Special Education*, 27, 166-175. Retrieved from EBSCO HOST database January 4, 2007.
- [8] Bowe, F. G. (2003). *Universal design in education: Teaching nontraditional students*. Westport, CT: Bergen & Garvey.
- [9] Rose, D. H., & Meyer, A. (2000). Universal design for learning. *Journal of Special Education Technology*, 15(1), 67-70.
- [10] Coyne, P., Ganely, P., Hall, T., Meo, G., Murray, E., & Gordon, D. (2006). Applying universal design for learning in the classroom. In D. H. Rose & A. Meyer (Eds.), *A practical reader in universal design for learning* (pp 1-13). Cambridge, MA: Harvard Education Press.
- [11] Jimenez, T. C., Graf, V. L., & Rose, E. (2007). Gaining access to general education: The promise of universal design for learning. *Teacher Education Quarterly*, 16(2), 41-54.
- [12] Rose, D. H., & Meyer, A., Eds. (2006). *A practical reader in universal design for learning*. Cambridge, MA: Harvard Education Press.