

Implementing UDL across a Pre-Service Middle Childhood Education Program

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Abstract

The Universal Design for Learning conceptual framework makes classroom learning more accessible for all students, but is often lacking in general education teacher preparation programs. This paper describes the ongoing joint efforts of middle-level and special education faculty to implement UDL throughout a four-year Middle Childhood program as part of a larger effort allowing teacher candidates to seek dual (special education and middle-level) licensure. Additionally, UDL as taught in a science and assessment course are detailed. Finally, ongoing and future efforts of faculty implementing UDL within the program are described.

INTRODUCTION

In the latter parts of the 20th century, Universal Design for Learning (UDL) emerged as a conceptual framework to make learning more accessible to students with disabilities in general education classrooms. The historical development of UDL has taken several turns. Edyburn (2010) laid out the principles of UDL as found in the 1997 reauthorization of the Individuals with Disabilities Education Act (IDEA), the work at the Center for Applied Special Technology (CAST) and the interpretive document of Orkwis and McLane (1998) that brought national attention to the framework, and Rose and Meyer's focused studies on applying UDL within education and developing curriculum for individual students (Meyer & Rose, 2000; Rose & Meyer, 2000; Rose & Meyer, 2002). The major emphasis of UDL was on students with disabilities in the general education classroom, who were struggling with learning due to barriers related to appropriate use of technology and pedagogy.

Recently it has been noted that general educators are not receiving appropriate instruction in the UDL construct and should be explicitly prepared (Vitelli, 2015; Cressey, 2016). Making the classroom more accessible to all students, especially those from historically marginalized populations, is an urgent need. Waitoller and King Thorius (2016) noted that the cross-pollination of culturally sustaining pedagogy with UDL can be used to address markers of difference such as dis/ability, class, gender, race, language, and ethnic-

ity. Further, Venkatesh's (2015) dissertation examined UDL as a framework for social justice. Venkatesh established that while students valued social justice, they often struggled with UDL and suggested that students require additional exposure to explicit instruction on implementation. UDL is an appropriate framework to teach students within all of our schools. A programmatic shift in how teacher education programs train and prepare their teacher candidates is needed.

This paper will describe how one university is revising their general education program to teach and implement UDL throughout a four-year general middle level (grades 4-9) education program with the goal of graduating general education teacher candidates with knowledge, skills, and dispositions deep enough to enact UDL in their classrooms and schools.

BACKGROUND

The Ohio Dean's Compact on Exceptional Children began meeting in 2012. It serves as a means of communication between many of the state's stakeholders: government leaders, deans, faculty, school districts, businesses, and national partners. This compact offers opportunities for collaboration to bridge theory and practice, foster meaningful P-16 partnerships, and to identify and respond to critical issues. It also allows for the implementation of innovative models of preparation (<https://www.ohiodeanscompact.org/our-purpose/our-purpos>).

Over the past three years, the Ohio Dean's Compact has funded efforts for our Middle Childhood (MDL) and Special Education (SPED) faculty to work together to create a dual-licensure program. The goal is to introduce eight special education conceptual frameworks throughout the MDL program allowing students an opportunity to obtain both a general and special education license. Faculty within the two departments met monthly and developed a program that implements these eight conceptual frameworks.

In Ohio, middle-level teacher candidates take coursework and seek licensure in two of the following four content areas: Science, Language Arts, Mathematics, and Social Studies. Due to limitations in the number of credit hours teacher candidates can take, special

education topics need to be taught within the general education curriculum.

This paper describes the ongoing effort of implementing the UDL framework throughout the four-year general education program for middle-level teacher candidates and illustrates how two Middle Childhood Faculty embed the teaching and implementation of UDL. Specifically, we describe UDL instruction in selected courses of chemistry and assessment, outline efforts to date, and planned future directions.

UDL IN THE MIDDLE-LEVEL PROGRAM

The Higher Education Opportunity Act (2008) defines UDL as a scientifically valid framework for guiding educational practice, providing flexibility in content presentation, student demonstration of knowledge/skills, and student engagement. Further, with regards to teacher preparation it states:

Students preparing to be teachers should “understand ... the effective use of technology, instructional techniques, and strategies **consistent with the principles of UDL.**” (Section 202)

Teacher candidates should be prepared for “successful implementation of technology-rich teaching and learning environments, including **environments consistent with the principles of UDL.**” (Section 231)

More recently, the Every Student Succeeds Act (ESSA, 2015) not only contained a federal endorsement of UDL, but stressed that the principles of UDL be included in state testing, classroom assessments, literacy instruction, and instructional technology to support the learning needs of all students. (Sections 1005, 1204, 2221, and 4104).

Our Middle Childhood Education program’s attempt to teach and embed UDL throughout the four-year curriculum is unique. Faculty within MDL and SPED met monthly and developed a program that implements UDL in select courses, building on prior knowledge annually. Students spend their first two years in pre-cohort taking common cross-disciplinary classes. During these two years, UDL is introduced and taught in Introduction to Education, Introduction to Special Education, Education Technology, Teaching and Learning in Diverse Classrooms, Phonics Theory and Practice, Chemistry in Today’s Society I and II, and Special Education Law. In cohort (junior and senior years) UDL is embedded in Foundations and Assessment of Literacy, Disciplinary Literacy in Middle School, Field Practicum I and II, Middle Level Practices and Planning for Instruction, Middle School Assessment, all disciplinary-related methods courses, and the Organization and Practice Capstone. By the end of these final years they are required to create effective lessons embedding UDL principles assessed not only in the cohort coursework but also via the Education Teacher Performance Assessment (edTPA).

UDL IN SCIENCE

MDL and SPED teacher candidates with an intention of science licensure take Chemistry in Today’s Society I and II during their pre-cohort sophomore year. This 2-semester sequence covers the chemistry content related to middle school while embedding nature of science components and teaching methods. In the second course, students complete a three-part project related to the integration of UDL, the chemistry content, the Ohio science standards and extended standards, and lesson planning. While these students have not yet had methods classes, this project motivates them to begin to think about UDL principles in relation to content, specifically the curriculum and pedagogy.

The first part of the project is completed individually. Students build off their prior UDL coursework in Introduction to Special Education, Introduction to Education, and Education Technology, then complete the IRIS module on UDL (<https://iris.peabody.vanderbilt.edu/module/udl/>). Afterwards they respond to a series of prompts: What is UDL, why should they use it, how does it make classroom learning more accessible for all students, and how is it used in the classroom with regards to lesson planning, assessment, etc.

The second part of the project is also completed individually and allows the students to get more deeply drawn into UDL and its principles. Students first read King-Sears (2009) commentary of UDL principles in technology and pedagogy and then read Edyburn’s (2010) response. For each article, students are asked to summarize and then reflect on how and why the information influences them as a teacher. Finally students are provided with a two-page RTI-UDL Compare and Contrast document. Once again they are asked to summarize and write a reflection on why and how it could or does influence them as a teacher.

The final part is a group project where the Instructor forms groups ensuring that MDL and SPED students will work together. Students in the class research both the Ohio Science Standards and the Extended Science Standards and compare how both are used for students with varying dis/abilities. Each group then chooses an activity covered in class during the year and connects the standards being taught with a given grade level and misconceptions students may possess. Students then report how they would teach the content utilizing UDL and differentiating instruction and assessment for students within the grade level. Finally, they specifically address concepts of social justice and any possible barriers to learning that might exist for marginalized populations.

The overarching goal is not for students to be experts at this point, especially as they are novices with no training in methods or assessment, but begin to realize

and contemplate how the UDL principles work with regards to content and pedagogy.

UDL IN MIDDLE-LEVEL ASSESSMENT

During their first semester in cohort, all middle-level education students take an introductory assessment course. Like many teacher candidates, these first semester juniors come to this course with the idea that the only way to assess students is via written tests. After students have learned about basic principles of assessment, including summative vs. formative assessments and the benefits of performance assessments, students are asked to consider other ways to assess students using the framework of UDL. In preparation for class, the instructor requires the students to complete readings from CAST (2010) and a book chapter from Rose and Meyer (2002), and to watch a video on UDL guidelines (Wakefield, 2011). The instructor uses these readings, as well as a brief classroom presentation and discussion to help activate students' prior knowledge on the topic of UDL. The class then compares two lesson plans: one that has considered the principles of UDL and one that is traditional. The students are then introduced to the idea of choice boards as a way of structuring the assessment of students. Students are shown a video of a teacher using a choice board in a classroom and then review and critique the teacher's creation. The students are then required to create their own choice board assessment. Their choice board must include grade level standards, and must consider the 3 principles of UDL. Additionally, their choice board must be constructed in such a way that students have the opportunity to use more than one modality, they do not contain traditional tests, and they go beyond basic factual recall.

The overarching goal for this course is for teacher candidates to consider the needs of all learners when they are assessing student learning. These candidates begin to understand that traditionally written assessments have limitations, and will not allow all students to demonstrate learning. Students take away from this exercise that often the learning goal is confounded with the manner of assessment and that teachers need to be clear and deliberate when they are creating assessments.

UDL IMPLEMENTATION AND FUTURE

Implementation of UDL has begun across MDL courses, with full implementation as a program slated to begin during the 2017-2018 school year with the incoming freshman class. To better prepare for full program-wide implementation, faculty in the MDL and SPED programs are participating in a Faculty Learning Community (FLC) during the current school year. The overarching goal is to foster systematic and consistent access to UDL knowledge and applicable skills across the program by increasing and improving the UDL knowledge base among participating faculty.

Currently the FLC is working on the creation of a document that addresses UDL alignment across the MDL program. The document will address the following in each course containing UDL instruction: Learning outcomes, assignments and rubrics, and other products or evidence of UDL instruction. Once this document is completed, we will be able to better align assignments to prevent unwanted repetition and overlap. Further we will then be able to critique, assess, and assist with UDL assignments in each class.

Longer term goals are research related to the effectiveness of this implementation. This FLC further will serve as a model to better implement the remaining seven special education conceptual frameworks.

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