Impact of UDL Integration on Teacher Candidates’ Knowledge, Perceptions, and Attitudes

Stacie B. Whinnery, Ed.D.
Jennifer Mesa, Ph.D.
Keri C. Fogle, Ph.D.
Keith W. Whinnery, Ph.D.
UWF Teacher Education

- General and Special Education are housed in one department
- Majority of teacher candidates are enrolled in our dual licensure program
- Faculty expressed a desire to increase collaboration and coordination
  - across general and special education courses
  - across coursework and clinical experiences
- Data reviews identified a need to more strongly infuse strategies for teaching diverse learners into general education content courses
Improving Educational Outcomes for Students with Disabilities (SWDs)

- Partnership with CEEDAR Center
  - Collaboration for Effective Educator Development Accountability, and Reform

- Florida DOE/CEEDAR State Leadership Team
  - Increase the knowledge and skills of all teachers working with SWDs
    - Provide guidance to institutions of higher education to revise teacher preparation programs
UWF Project Goals

1. Develop a collaborative faculty-led process to enhance teacher preparation curricula

2. Use the collaborative process to strengthen UDL content coverage in undergraduate teacher preparation programs
Critical Components

- Adopt a common language
- Develop a faculty learning community (FLC)
- Mediate the learning process, and provide ongoing support
- Introduce and model the “critical friend” approach
- Focus on internal priorities, not external requirements
- Celebrate and recognize the work of the group

Collaborative Curriculum Enhancement
## UWF Curriculum Enhancement Process

<table>
<thead>
<tr>
<th>Time</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer</td>
<td>• Project team <strong>shared vision</strong> with department and college administration</td>
</tr>
</tbody>
</table>
| Fall   | • Consultant provided **UDL training** to all teacher ed. faculty  
• Faculty volunteered to participate in **Faculty Learning Community**  
• Professional development and collaborative **curriculum review** |
| Spring | • Collaborative development of enhanced curriculum map  
• Continued professional development  
• Collaborative **course enhancements** – shared ideas and resources |
| Fall   | • **Implementation**  
• **Replication** – repeated process with additional courses and programs |
| Spring | • Data collection/analysis – **faculty perceptions** |
| Current| • Data collection/analysis – **student development** |
UWF UDL Resources

https://sites.google.com/a/uwf.edu/uwf-udl-faculty-learning-community/

Welcome! The UWF Teacher Education UDL website has been designed to share resources and ideas related to the UDL course review and enhancement process. This site is designed to align with the CEEDAR UDL Innovation Configuration and is organized around the UDL Essential Components listed to the left.
Course Enhancement Examples

• Foundations of Education
  – IRIS UDL module

• Methods of Inclusion and Collaboration
  – Introduction to UDL
    • Video – “UDL At a Glance” (CAST)
      https://www.youtube.com/watch?v=bDvKnY0g6e4
    • Article Reading - “Using a Universal Design Approach to Find Barriers and Solutions in the Curriculum”
    • Discussion Groups, Quiz

• Teaching Science in the Elementary School
  – Provide UDL Review Module (available as needed)
  – Research & design inquiry-based science instruction that engages students with diverse learning needs
    • Identify learning barriers and related UDL strategies
How do you use the UDL framework to enhance an individual lesson?

- Review of [CAST UDL Guidelines 2.0](#)

- Modeling:
  - Identifying potential learning barriers
  - Using UDL Guidelines/Checkpoints to reduce barriers

- Guided Practice (small groups):
  - Identifying potential learning barriers
  - Using UDL Guidelines/Checkpoints to reduce barriers
Research Questions Addressed

• Perceived and actual knowledge of UDL
• Perceived usefulness of UDL strategies
• Perceived confidence in using UDL strategies
• Attitudes towards students with disabilities (SWDs)
Methodology

• Quasi-Experimental, static group comparison design

• Independent Variable
  – Systematic UDL enhancements across teacher education courses

• Dependent Variables
  – Perceptions/Attitude Survey
  – Lesson Plan Analysis
Measures of Student Impact

• Student Survey (Qualtrics)
  – Perceived knowledge, usefulness & confidence related to UDL framework
  – Attitudes towards students with disabilities

• Lesson Plan Analysis
  – Actual knowledge of UDL framework applied in lesson plans
  – Rubric based on CAST UDL Guidelines 2.0
# Student Surveys

<table>
<thead>
<tr>
<th>Construct</th>
<th>Pre Mean Score (n=32)</th>
<th>Post Mean Score (n=33)</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes towards SWDs</td>
<td>45.41</td>
<td>45.72</td>
<td></td>
</tr>
<tr>
<td>Perceived knowledge</td>
<td>46.84</td>
<td>51.19*</td>
<td>0.80</td>
</tr>
<tr>
<td>Perceived usefulness</td>
<td>49.39</td>
<td>53.05*</td>
<td>0.77</td>
</tr>
<tr>
<td>Perceived confidence</td>
<td>44.73</td>
<td>47.74</td>
<td></td>
</tr>
</tbody>
</table>

* p<0.05
Lesson Plan Reviews

- Activate prior knowledge
- Clarify vocabulary
- Guide practice
- Minimize distractions
- Mastery-feedback

Most common pre and post

- Alternatives for auditory/visual information
- Highlighting critical features and patterns

More common post only

- Support for executive functioning
- Self-assessment and goal-setting
- Choice and autonomy
- Support for self-regulation

Less common pre and post
Implications

• Scripted curriculum and existing teaching practices may limit the use of some UDL strategies.
  – Action and expression

• Students need more support to transfer knowledge from content methods classes to planning instruction in K-12 classrooms.
  – Purposefully use UDL strategies to address learning barriers
Implications continued

- Intentional focus on supporting executive functioning and self-regulation.

- Importance of collaborating with cooperating teachers to guide UDL implementation
  - Teachers have requested training
Lesson Plan Review Practice

• Small Groups
  – Practice reviewing lesson using rubric

• Tools:
  – UDL Lesson Plan Evaluation Rubric
Q & A

• For more information, please contact

Stacie Whinnery
swhinnery@uwf.edu
Recommendations

• Consider providing support and scaffolding to facilitate transfer of skills to strategically use UDL in K-12 classrooms
• Develop strategies with district partners to develop a common understanding of UDL and ways to implement it across the curriculum
• Incorporate an intentional focus on executive functioning and self-regulation