Students in the Adapted Curriculum: Universal Design for Learning

PowerPoint Slides to be used in conjunction with the Facilitator’s Guide
Recommended citation:

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Session Agenda

- Introduction
- Session Goals and Objectives
- Background on UDL
- IDEA and UDL
- Collaboration and UDL
- Creating Lessons and Pyramid Planning
- Using Assistive Technology for UDL
Session Agenda, continued

• UDL and Culturally Responsive Training
• Universal Design for Learning in Content Areas – What Might it Look Like?
• Summary
• Evaluation
Introduction

• Students with significant disabilities in my regular education classroom? No way!
• Students with cognitive and physical disabilities accessing the general curriculum? No way!
• Many people think that students with significant physical or cognitive disabilities cannot be included in the general curriculum.
See an example of inclusion in action in the video at http://mast.ecu.edu/modules/udl_sac/lib/media/video01.html. The student has significant cognitive and physical disabilities; yet, she is a part of her classroom and is working and learning side by side with her peers.

The students were working together to find the narrator of a literacy selection.
Introduction, continued

• They worked collaboratively as a group to answer questions. Each student had a chance to answer.
• Though the student in the video took about 45 seconds to answer a yes or no question, “Was Tessa the narrator?”, she was able to answer the question correctly.
• Her peer was holding up two cards, one that said “yes” and another that said “no”.
Introduction, continued

• The student will either use eye gaze to the correct answer or touch the correct answer. On this particular question, the student touched her response, and all of her group agreed that was the correct answer.

• The students in this regular education language arts class learn the 6th grade North Carolina Standard Course of Study curriculum.
Introduction, continued

• One student with significant disabilities is included in this class. She is surrounded by peers in this class and is loved by the teacher and the other students. She is able to learn in this classroom due to a Universal Design for Learning approach.

• In this classroom her regular education peers can learn the same material as the student with significant disabilities and also help her in the process.
Introduction, continued

• Universal design, when applied to curriculum development, provides access to the general curriculum for students with disabilities.

• Even students with the most significant disabilities are guaranteed access to the general curriculum and Universal Design for Learning (UDL) can be the key that unlocks that access.
Session Goal

• Goal: to examine what Universal Design for Learning is and how it can be used with students who are in the adapted curriculum, students with severe physical and/or intellectual disabilities.
Session Objectives

Participants will be able to:

• Identify main components of Universal Design for Learning.

• Identify ways to incorporate students in the adapted curriculum using Universal Design for Learning.

• Select a plan for all students using Universal Design for Learning.
Session Objectives, continued

• Identify uses of assistive technology in planning and using Universal Design for Learning.

• Select ways that universally designed lessons can be created to include those with significant disabilities.
Background on UDL

• Universal Design for Learning (UDL) is a research-based model for curricular design that ensures participation in the general education program of all students, including those with disabilities.

• The framework of UDL began in architecture. It was called Universal Design, a term coined by Richard Mace, an architect who had physical impairments himself and devoted his life to a design institute located in North Carolina.
Background on UDL, continued

• Universal Design can be seen in our daily life.
  – Examples include: curb cuts, automatic doors, closed captioned television, & restroom handrails.
  – Curb cuts were originally designed for those with disabilities, but they can be used by everyone (e.g., people walking with strollers and carts) which makes them universal.
  – Another example is purse hooks in public restrooms. Hooks were lowered to be accessible for those in wheelchairs but were soon found to be universally helpful to prevent purse snatching.
Background on UDL, continued

• Principles of Universal Design in architecture have been applied to education and called Universal Design for Learning. Universal Design for Learning has three essential qualities:
  – representation,
  – engagement,
  – expression.
The 3M’s of UDL

**Multiple Means of Representation**
- Gives learners various ways of acquiring information and knowledge

**Multiple Means of Engagement**
- Taps into learners' interests, challenges them appropriately, and motivates them to learn

**Multiple Means of Expression**
- Provides learners alternatives for demonstrating what they know

CAST, 2007
Debbie Metcalf and Rhys Myrick Potts, 2010
Background on UDL, continued

• The 3M’s of Universal Design for Learning are essential.
• Offer an array of flexible options for students.
• This can be done through multiple means of representation, engagement, and expression
Activity- Background on UDL

• Developing a Collaboration Tool Box: Brainstorm to identify different people and resources to collaborate on a plan for Universal Design for Learning in your school and school district.
  – Start a list with contact information with at least 20 people or resources you can use for collaboration.
  – Add to the list as you learn more about UDL through this module.
IDEA and UDL

• The Individuals with Disabilities Education Act (IDEA) of 1997 mandates that all students, even those with the most significant disabilities, should have access to the general curriculum. Though mandated in 1997 and 2004 reauthorizations of IDEA, many studies are showing that this is not taking place and that functional skills are still taking precedent over the teaching of curriculum.
IDEA and UDL, continued

- Students with disabilities are able to learn; teaching academic content can be promising for students.
- Access and progress in general curriculum for students with disabilities relies on planning and design of academic content and instruction to be accessible for all students as well as use of technology and current pedagogical strategies.
IDEA and UDL, continued

• What does Universal Design for Learning look like for students with significant disabilities?
  – Students with significant disabilities or low-incidence disabilities can be defined as those that have sensory impairments, Autism, physical or health disabilities, traumatic brain injury, or severe cognitive impairments (Gargiulo & Metcalf, 2010).
IDEA and UDL, continued

– The concept of UDL, especially when considering those with the most significant disabilities, can be seen in both the general education classroom, special education classroom, and in the total school environment.

– Each lesson taught to students needs to be planned with UDL principles in mind so that everyone in the classroom—students who are academically gifted or those with disabilities—can learn something from the same lesson.
IDEA and UDL, continued

• Three main ways to create an environment using UDL strategies for students with the most significant disabilities. Students can be instructed:
  – in a regular education classroom;
  – in a self-contained classroom-setting;
  – in a reverse mainstreaming classroom.

• These are done in isolation or combined throughout the school day for students in the adapted curriculum.
IDEA and UDL, continued

In order for Universal Design for Learning to be successful for all students, collaboration is crucial. Who are those key people that special education teachers should collaborate with when planning lessons and activities with Universal Design for Learning in mind?
Collaboration and UDL

• Collaboration with other special education teachers and content experts is vital. There are many people and resources in the school, district, and community that teachers can work in partnership to plan.

• Collaboration is seen in special education as cooperative relationships between individuals who are working together on a mutually agreed upon goal.
Collaboration and UDL, continued

- Examples of people and resources to collaboratively establish plans based upon UDL principles to increase involvement of students:

**People:**

- Regular education teachers
- District content experts
- Paraeducators
- Special education teachers
- Students
- Parents and families of students
- Instructional coaches
- Administrators
- Transition specialists
Resources:

• Pacing guides
• Content specific meetings and grade level meetings
• School improvement team
• Conferences
• Professional development opportunities

• Once the collaboration piece is in place, planning and creating UDL lessons and materials can begin.

• Planning for UDL involves collaboration and creating lessons in a different way.
Creating Lessons and Pyramid Planning

• Planning using UDL principles can be time consuming at first, but once it becomes familiar, unit and specific lesson planning will be easier!

• Presented here is a Universal Design for Learning approach to planning for lessons through Pyramid Planning.

• The audio that accompanies the following slide is available at http://mast.ecu.edu/modules/udl_sac/lib/media/slides02/SlideShow.html.
Creating Lessons and Pyramid Planning, continued

• To use a pyramid planning model, it helps to have a form to guide development of the lesson, unit, or activity. Following and in the Facilitator’s Guide is an example of a planning guide that covers not only pyramid planning but also the multiple means of representation, engagement, and expression that will be used for the learners.
Planning Universally Designed Instruction for Adapted Curriculum

Teacher(s)/Paraprofessionals: __________________________ Subject: __________________________ Collaborators: __________________________

Grades: __________________________ Setting (check one or more): Regular Education Setting □ Self-Contained Setting □ Reverse Mainstreaming Setting □

Topic: ____________________________________________

Standard Course of Study: ______________________________________

Extensions: ____________________________________________

Pacing Guide: ____________________________________________

Teacher Objectives: Some: ____________________________________________

Most: ____________________________________________

All: ____________________________________________

Representational: ____________________________________________

Engagement: ____________________________________________

Expression: ____________________________________________

Assessment: Some: ____________________________________________

Most: ____________________________________________

All: ____________________________________________

Materials Needed: ____________________________________________

Rhye Myrick Potts 2010
In pairs or groups, develop a lesson for students in a regular education 7th grade social studies class. Students in the class range from regular education students, academically gifted students, students with significant disabilities who are non-verbal, and students with learning disabilities.
Activity- Creating Lessons and Pyramid Planning, continued

• Use the Planning Universally Designed Instruction for Adapted Curriculum document above. Participants can choose from the following topics that are normally covered in 7th grade social studies.

• Africa, Australia, or Asia
Using Assistive Technology for UDL

• For students with disabilities, especially those with significant disabilities, assistive technology is one main way to give learners multiple means of representation, engagement, and expression.
  – What are the assistive technologies and other materials needed to ensure that all students have access to the information, participation, and the opportunity to demonstrate understanding?
Using Assistive Technology for UDL, continued

• The No Child Left Behind Act (2001) and IDEA (2004) encourage educators to include students in regular education classrooms. Assistive technology is often needed to help students with significant disabilities access the general curriculum.

• Assistive technology is defined as any item that can be bought or made that helps people with disabilities.
Using Assistive Technology for UDL, continued

• Assistive Technology can be high tech devices or equipment or low-tech items.
  – An example of high tech assistive technology would be a computer system; and an example of low tech assistive technology might be something as simple as a post-it note. Assistive technology can level the playing field for those with disabilities and can give them the means to express their knowledge.
Using Assistive Technology for UDL, continued

  – In this classroom students with significant physical and cognitive disabilities are using an interactive whiteboard.
  – This specific high tech assistive technology device is amazing because it meets all 3Ms of Universal Design for Learning at one time.
Using Assistive Technology for UDL, continued

– It is a wonderful way to represent materials and lessons for all students. Students with and without disabilities are very engaged when doing work on the interactive whiteboard.

– The interactive whiteboard allows the students many different ways to represent what they have learned. In the video, look for all 3Ms of Universal Design for Learning?
Using Assistive Technology for UDL, continued

– The student in this video is using an interactive whiteboard to group foods on the food guide pyramid in a health lesson.

– Using *Kidspiration* software, the lesson was represented in a different way and included bright colors and sounds for engagement.

– The student in this video is non-verbal and was able to express what vegetable she would like via voice output on *Kidspiration* software and was able to drag and drop it in the correct grouping location to represent mastery.
Using Assistive Technology for UDL, continued

• UDL calls for many different ways of teaching and engaging students. The following slides feature assistive technology that can be used for multiple means of representation, engagement, and expression for learners.

• The following slides are narrated at http://mast.ecu.edu/modules/udl_sac/lib/media/slides03/SlideShow.html
Multiple of Means of Representation
Using Assistive Technology for UDL, continued

• Multiple means of representation can be endless—there are more ways that lessons and content can be represented to all students.

• Next we will look at engagement. In the age of video games and the world-wide web, students expect high tech technology.

• Assistive technology can help engage learners.

• The following slides are narrated at http://mast.ecu.edu/modules/udl_sac/lib/media/slides04/SlideShow.html.
Multiple of Means of Engagement
Activity- Using Assistive Technology for UDL

- Create a chart like the one below and fill in different technology hardware and software that could be used for your students in each category.

<table>
<thead>
<tr>
<th>Representation</th>
<th>Engagement</th>
<th>Expression</th>
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UDL and Culturally Responsive Training

• UDL can also be helpful for students who are English Language Learners and those from other cultures.
• Using different means of representation, engagement, and expression will aid in their learning as well.
• Visual representations of vocabulary words help not only symbolic learners but also the English Language Learners.
UDL and Culturally Responsive Training, continued

• Students with disabilities in classrooms today represent different cultures—celebrate and respect the different cultures as well as the different disabilities in the schools.

• One example of UDL and culturally responsive teaching is to insure picture representations correctly represent the students’ gender, culture, etc.
UDL and Culturally Responsive Training, continued

- Examples include:
  - A communication device created for a male African-American student age 14, the voice recorded should be as close to his as possible. The student’s regular education peers are a vital resource.
  - Use of a Clicker 5 program called “Our School”, software created for English Language Learners to acquire new words through an interactive activity on the computer.
Math

• One of the most difficult subjects to teach for students in the adapted curriculum.

• Play video at: http://mast.ecu.edu/modules/udl_sac/lib/media/video03.html.

• A teacher demonstrates tactile response cards, a low-tech way to teach shapes in geometry.
UDL in Content Areas, continued

• The video showed a multisensory approach to teach geometric shapes and also a way for students to use the same materials to express their knowledge.

• For students with visual impairments the tactile representation of each shape is important so they can feel the difference of each one they are learning about.
UDL in Content Areas, continued

• Watch the video about use of an interactive whiteboard in an Exceptional Children’s Classroom at http://mast.ecu.edu/modules/udl_sac/lib/media/video04.html. It provides another example of teaching math using a UDL approach. This is an exceptional children’s classroom where most of the students have severe cognitive and physical disabilities. They are learning the concept of more and less.
UDL in Content Areas, continued

• The learners were using the interactive whiteboard and a PowerPoint Presentation to meet the 3Ms of UDL; representation, engagement, and expression.

• Material was engaging to the student because it was about one of her favorite topics, *High School Musical*.

• In a middle school classroom, find highly motivating age appropriate materials.
UDL in Content Areas, continued

• Student has the option of using eye gaze, touching, or using the interactive pen to express her answer. She expressed her answer by using eye gaze: gaze at the answer, then look at someone else to select the answer.

• Teacher and paraeducator praised her for her correct response and gave assistance to finalize the response by clicking on the correct answer with the pen.
UDL in Content Areas, continued

• Ways to teach math to all learners:
  – Math software and websites;
  – Manipulatives;
  – Story-based math- creating stories using the students in the class and things they like.

• Remember the multiple means of representation, engagement, and expression when teaching math.
UDL in Content Areas, continued

Language Arts

• Language arts can be fun to teach when incorporating UDL and collaboration.
• At the start of each year, look at the suggested and required reading for each grade level can help when planning novels and activities.
UDL in Content Areas, continued

- The Center for Applied Special Technology (CAST) has wonderful example of books that are created for all students- go to http://udleditions.cast.org/ and check out *Call of The Wild*.

- Note what UDL looks like and how one novel can be implemented with all students. *Call of the Wild* and others are examples of multiple means of representation, engagement, and expression.
UDL in Content Areas, continued

• The books is *represented* using the computer or even an interactive whiteboard in some settings. Students can read written words or have them read aloud them via the computer.

• *Engagement*- It will capture the students’ attention with accompanying activities like the maps that follow the story.
UDL in Content Areas, continued

• For *expression*, instead of a typical test, students can express their knowledge by using the “Stop and Think” function on the pages. Students are able to assess their knowledge and get help when needed.
UDL in Content Areas, continued

• Next video portrays a self-contained language arts lesson teaching literacy skills. Students are learning about words and letters and their importance. Sentence structure and building and spelling can be gained from these types of literacy lesson.

• Play video of a literacy lesson in a language arts class at http://mast.ecu.edu/modules/udl_sac/lib/media/video05.html.
UDL in Content Areas, continued

• All three students in this small group lesson were non-verbal and were using augmentative communication devices.
• The literacy lesson focused on what words are and why they are important.
• *Representation:* the teacher used a black dry erase board with neon markers.
UDL in Content Areas, continued

• *Engagement*: She talked about traveling, since a few students had just gotten back from vacations.

• *Expression*: Students were able to express themselves through the augmentative communication devices and through assisted writing on the interactive whiteboard.
UDL in Content Areas, continued

Science

• A fun and hands-on subject that all students can enjoy.
• Involves inquiry based instruction that helps all students.
• Through UDL, all students can do activities with problem solving and critical thinking.
UDL in Content Areas, continued

• The video at http://mast.ecu.edu/modules/udl_sac/lib/media/video06.html shows a lesson about solutes, solvents, and dissolving conducted in a reverse mainstreaming class with typically developing peers. It involves:
  – Hands-on activities that involve multiple means of representation and multiple means of engagement.
  – The student was extremely engaged and excited about the science activity.
UDL in Content Areas, continued

• The student had hands-on activity to learn about solvents and solutions, part of the 8th grade curriculum.

• Music can be powerful in any subject when used for engagement. A song is called “Solute, Solvent, Solution” served as a hook or means of engagement.

(Song available at http://mast.ecu.edu/modules/udl_sac/lib/media/video06.html.
Social studies

• One of the least researched areas in terms of instruction for students with significant disabilities.

• It is still important to teach students information that will enable them to learn about being good citizens as well as be prepared for upcoming assessments.
UDL in Content Areas, continued

• We must give access to general curriculum, including social studies.

• Social studies can be fun to teach when using the 3M’s: representation, engagement, and expression.

• The video at http://mast.ecu.edu/modules/udlSac/lib/media/video07.html shows an example of a tactile book in box about King Tut’s Tomb, a social studies lesson about Egypt.
UDL in Content Areas, continued

• This book in a box on King Tut’s Tomb is an example of how social studies instruction can use UDL principles:
  – The content was *represented* by a physical book, computer book, and an audio CD.
  – Students were *engaged* with the real life objects they were able to touch and feel.
  – Though not shown in the video, students *expressed* their response choices with picture cards or augmentative communication devices.
Activity- UDL in Content Areas

Develop a Book in a Box

• Select an age appropriate book that you use in the classroom or with a group of students or student with whom you work.

• Review each chapter. For each, select vocabulary words and objects that can be used to represent that chapter.

• Some objects may have to be purchased or found; some items will have to be creatively constructed.
Activity- UDL in Content Areas, continued

- Put all items in a box so that when ready to read the book, you have tactile objects as well as vocabulary and/or picture vocabulary.
- As time allows, present your books in a box to each other.
Summary

• Universal Design for Learning is a framework that can help teachers differentiate their instruction for every student in their class.

• UDL is the way students with disabilities, even those with significant disabilities, can access the general curriculum.

• UDL involves the 3Ms: multiple means of representation, engagement, and expression.
Summary, continued

- Multiple means of *representation* is how the material is presented to the students.
- *Engagement* is how to gain the learners' attention.
- *Expression* is how the student will be able to convey what they have learned.
- Assistive technology is vital when wanting to apply Universal Design for Learning principles for students with significant disabilities.
Session Evaluation

• A form for participants to evaluate the session is available in the Facilitator’s Guide.
Focus and Reflection Questions

1. How have you benefited from Universal Design changes? Which changes do you see as leading toward UDL?

2. In your experiences in schools, what students do you now see would have benefitted from UDL applications?
Application & Extension activities

1. Universally Design your School- make a Universal Design for Learning Plan for your school. Think of different classrooms and the school environment and discover ways that it could be set up for every learner. Think about:

   • multiple means of representation, engagement, and expression;
   • the signs and words on the walls;
Application & Extension activities, continued

- the placement of water fountains, doors, bathrooms, tables, whiteboards, etc.;
- methods that teachers use in your school.
- Consider what changes could be made to make the learning environment accessible to every student, even those with the most significant disabilities.
Self-Assessment

• A self-assessment with response feedback is available at http://mast.ecu.edu/modules/udl_sac/quiz/
Participants may take this assessment online to evaluate their learning about content presented in this module.