# ACCESSIBLE LEARNING SPACES

## A Guide to Implementing UNIVERSAL DESIGN in Early Childhood

CINDY MUDROCH, MEd

# ACCESSIBLE LEARNING SPACES

## A Guide to Implementing UNIVERSAL DESIGN in Early Childhood

CINDY MUDROCH, MEd

Gryphon House
www.gryphonhouse.com

## Copyright



Published by Gryphon House, Inc.
P. O. Box 10, Lewisville, NC 27023
800.638.0928; 877.638.7576 [fax]

Visit us on the web at www.gryphonhouse.com.



Library of Congress Control Number: 2023931238

## Bulk Purchase

Gryphon House books are available for special premiums and sales promotions as well as for fund-raising use. Special editions or book excerpts also can be created to specifications. For details, call 800.638.0928.

## Disclaimer

Gryphon House, Inc., cannot be held responsible for damage, mishap, or injury incurred during the use of or because of activities in this book. Appropriate and reasonable caution and adult supervision of children involved in activities and corresponding to the age and capability of each child involved are recommended at all times. Do not leave children unattended at any time. Observe safety and caution at all times.

# DEDICATION

*This book is dedicated to my son, Robbie, who was brilliant, funny, compassionate, and positive his entire life.*

# TABLE OF CONTENTS

# INTRODUCTION

Since 1983, I have taught preschool through third grade as a general- and special-education teacher. I have always believed in making education accessible to all children. This belief became more personal with the birth of our third child, Robbie.

With our first two children, I never worried about their being included or receiving what they needed at school. When Robbie was born, everything changed. He started having ear infections at a few weeks old and experienced significant speech and language delays due to hearing problems. We immediately started interventions with a speech teacher, who came to our house twice a week to work with him. Adding to his difficulties, he also had significant sensory issues; he would not eat anything too hot or too cold. Thankfully, Robbie attended an outstanding early childhood program that used many universal design for learning (UDL) guidelines while providing a full-inclusion preschool program. They also incorporated the Reggio approach, an early childhood teaching philosophy that allows children to explore and learn while doing hands-on projects and that encourages visual and written documentation of children's engaged learning. His teachers used multiple means of instruction, so my son and other children who did not learn auditorily could understand the same lesson visually. Children who learned better kinesthetically were encouraged to touch, feel, and explore. Robbie went from being almost nonverbal and following very few directions to almost catching up to his peers with his language skills by age six. He was also showing usual math abilities; on an assessment, he scored at the 99th percentile for his age.

As he grew, Robbie faced challenges with his health. At age five, he was diagnosed with attention-deficit hyperactivity disorder (ADHD). He was thirteen years old when he was diagnosed with Asperger's syndrome, which is now included as part of autism spectrum disorder (ASD). At age fourteen, he was diagnosed with Marfan syndrome, a genetic connective-tissue disorder that affected his heart, lungs, and spine. He didn't let these barriers stop him. In high school, he attended the Oklahoma School of Science and Math for gifted children. He later graduated from the University of Tulsa with a computer science and mathematics degree. He is an early childhood UDL success story!

I firmly believe that all the interventions Robbie received as a young child opened the doors to his future success. Sadly, he was diagnosed with bone cancer at age twenty-one. While fighting the disease, he didn't give up on following his dreams. He had always wanted to work at Google, so he applied and they asked to interview him in person. Despite the fact that Robbie was by then physically disabled due to cancer, he flew to San Francisco. He was offered the job and a contract a few months later, but by then, his cancer was spreading quickly. A few days before he passed away, he asked me if I would write his story. As a mother and an educator, I am on a mission to spread the importance of the UDL mindset in the classroom.

Universal design frequently opens doors beyond the original purpose. What you change for a few people often benefits many more. For example, wheelchair ramps also benefit mothers with strollers, people walking pets, those who use walkers or canes, people carrying groceries or pulling luggage, children on scooters, the elderly, and many more. Consider the following inventions that were created for a specific audience but are now widely used by many.

- The keyboard was developed to help people who could not see to write by hand (History Computer Staff, 2021).
- The electric toothbrush was invented to help people with limited strength and mobility independently brush their teeth (Lee, 2009).
- The Foundation for the Blind first started using audiobooks in 1932 (Conn-Powers, Cross, Traub, and Hutter-Pishgahi, 2006). Now, these books are widely used by people of a variety of abilities.

These are notable examples of how an accommodation can benefit more than the intended population. The same idea applies to classrooms; flexible accommodations introduced for a few can benefit many more children.

## How This Book Is Organized

Universal design for learning is not a special-education program—it is for all learners. All children benefit from having engaging lessons and more choices during the learning process. The UDL teaching method looks at the many needs of children and provides multiple pathways toward student success.

Chapter 1 introduces UDL and explains how the approach opens a new world with unlimited possibilities in the classroom. With UDL, schools can adjust learning materials, learning tools, and lesson plans to reach a broader range of abilities and needs. Educators can transform their classrooms from a traditional model to a model that provides equitable and accessible education for all.

In chapter 2, we delve deeper into the UDL guidelines and the fundamental principles they are founded on.

In chapter 3, we explore flipping the learning environment, examining ways to add more versatile choices while engaging children in discovery, exploration, and reaching their learning goals. When setting up a learning environment, many considerations support diverse teaching and learning. For example, educators can include innovative learning spaces that serve multiple functions and allow various means of instruction and learning. Flexible seating options can be helpful with focus, attention, and comfort.

Chapter 4 examines common learning variabilities and ways to help students succeed. *Learning variabilities* is a term that encompasses the many ways in which a disability, environment, disease, or genetic disorder could affect a child's ability to learn. But UDL is not limited to looking at learning disabilities; this method looks at the whole child. Children do not need a label or diagnosis for early interventions to start. For example, a child could be very bright, full of energy, and have trouble staying focused. Another child could come to school hungry, therefore lacking energy to keep up with her peers. UDL approaches make learning more flexible and accessible for all children.

In chapter 5, we look at ways to use low-, medium-, and high-tech interventions during instruction, learning, and assessment. Low-tech interventions include items such as pencil grips, different writing instruments, visuals, and non-electronic aids. A medium-tech example could be a unique seat cushion or weighted lap pad. High-tech examples include tablets such as iPads, computers, special adaptive equipment, and more.

Chapter 6 offers the reader ways to rethink lesson planning with UDL guidelines in mind. By looking at the classroom environment, learning variabilities, and technical interventions, along with the knowledge of UDL, teachers can plan for a broader range of students. Daily, children are expected to learn the same way as their peers.

The appendices explore inexpensive ideas for DIY projects for UDL classrooms, technology options to try, books for children with different learning variabilities, and further reading for educators.

As educators push for innovations and additional pathways for learning, they are on the front lines of education reform. As you begin or continue your UDL journey, remember my son Robbie, who faced many barriers in his short life, but he never gave up. His life story is the inspiration behind writing this book.

# CHAPTER 1
# Smart from the Start: An Introduction to Universal Design for Learning

*"Do not confine your children to your learning, for they were born in another time."*

**• Hebrew Proverb •**

## Eli's Story

Several years ago, when I was teaching kindergarten, one family passed a sealed letter to me as they walked toward the door. I had just met their son, Eli, at kindergarten roundup and had talked with them for the first time. I started reading as they practically ran down the hallway and out of the school. Their letter shared more about their son and some of his problems. They did not know what was wrong, only that his preschool experience had left them afraid for him, and they were visibly scared to send him to kindergarten.

Eli had not fit the average expectations for a preschooler, where the curriculum included fingerpainting and playing nicely with friends. To avoid getting his hands dirty, he refused to fingerpaint or touch anything messy, and he frequently landed in time-out for being uncooperative. His playtime was also a disaster, as his social skills were significantly delayed. He was content playing by himself and twirling objects, and he would not think twice about taking an interesting toy from someone else. At an early age, he was becoming depressed from the daily failure to meet expectations.

Before the first day of kindergarten, I put a few supports into place for all the children. One change was to allow any child to use disposable gloves in the art center. This choice allowed Eli and other children to explore and learn without the sensory effect of messy hands. Eli smiled when he realized that he could fingerpaint and keep his hands clean.

Weeks later, when one glove slipped and his finger got wet, he realized he was okay. His face shined as he stuck both hands into the paint without gloves for the first time. His mother cried when she saw the picture of him fingerpainting without gloves.

Years later, when tested, Eli was found to be highly gifted and on the autism spectrum. Early childhood barriers had often kept him from showing his full potential. Eli's story is one of the many reasons I am passionate about using the strategies and philosophies behind universal design for learning. UDL methods do not have to be significant changes to have a significant impact on children's lives.

## What Is Universal Design for Learning?

Imagine that you can shop for groceries only in your age group's most common store areas. But if you need gluten-free, lactose-free, or specialty foods, you must wait and have someone take you and your group to a separate room for your groceries. If your food needs are too great, they will not let you in the regular grocery store at all. You can see other people coming and going, but you are left out. It is a widespread practice in education to provide materials, instruction, and assessment for the typical child. Many children, including dual language learners and children with learning disabilities or giftedness, are left out.

The philosophy behind this method is much more than another teaching strategy that the next education fad will replace. It is a mindset that all children deserve and benefit from equal rights to an education free of barriers and separation from their peers. Yes, there is still a place and need for specialized programs, but a more inclusive education is possible within a UDL classroom. Children have the right to access what they need to succeed without waiting to fail or waiting for a unique program to allow them what they need.

Universal design for learning is a mindset that looks at planning smart from the start by examining potential learning barriers and considering ways to make learning more accessible to all students. Instead of traditional methods that often leave many children underserved and underachieving, "UDL is flexible and based on the premise that there is no 'one size fits all'" (Thoma, Bartholomew, and Scott 2009). UDL involves incorporating variabilities that benefit all children into the original design of learning materials, assistive technology, computer programs, buildings, and accommodations. This method allows children to use the same learning materials with innovative designs from the start. For example, adding a graphic organizer to a textbook chapter to help students organize the main ideas is a UDL method. Even a simple change, such as gloves for fingerpainting, can make a difference for a child. The UDL guidelines are used in settings for people of all ages, from preschools to universities, as educators plan for all students to become expert learners.

Flexibility and choice are often missing in education. Everyone, not just children with identified learning challenges, has unique needs. Teachers also have limits placed on them and are frequently restricted to using a one-size-fits-all curriculum that limits their gifts and individuality. A traditional classroom or school often examines student data and does not consider obstacles as a reason for assessment scores to fall below expectations.

Some obstacles that children face can, in fact, impact their learning. For example, when a child struggles with hearing and the instruction lacks visuals, that child is at a disadvantage in learning the lesson. Inflexibility can also cause children to be excluded. For example, if a teacher restricts children to answering questions verbally, a child who has limited language skills may struggle to show what they know. That child may be great at numbers but doesn't respond to the teacher's questions. The teacher may assume the child does not know the answers. On the other hand, if the teacher offers the children multiple ways to show what they know, that same child can draw or point to numbers. A true measure of the child's ability is possible.

Focus is another challenge for some children. They may miss instructions or directions and end up being lost when the rest of the class starts a project or lesson. I have seen an entire class line up, but the easily distracted child has no idea why the class is leaving and becomes distressed. A child with sensory sensitivities may struggle to concentrate on class activities. The lighting or noise in the room could affect their performance.

A child with undiagnosed vision issues can have a hard time learning. A child who processes information more slowly than their peers may give up during an assessment because they become overwhelmed. If the teacher changes the assessment by breaking it down to only a few questions at a time, the same child can excel.

Unfortunately, educators often accept the outcomes as the best the children can do, without considering each child's learning variabilities. With high accountability and the expectation that all children will master both general and specialized curricula, educators are looking for strategies to help students thrive. The need for better-designed instruction, materials, and classrooms is a top priority. Once you dive into the UDL approach, you will realize that everyone benefits from a more flexible mindset. Educators with choices, flexibility, and support can help their students excel. More students can demonstrate their knowledge without the many barriers commonly faced to receiving an equitable and accessible education.

What if educators offered a wide range of choices during the planning, learning, and assessing process? What if educators set up the learning environment to make the essential concepts accessible to everyone? The core value of UDL is to design education for all. "UDL is about taking your skill, your passion, and your craft and designing your lessons with embedded options, so they are relevant, accessible, and challenging to all students" (Novak, 2016).

UDL is "a scientifically valid instructional framework for guiding the design of learning environments that support all students" (Zhang et al., 2021). UDL methods mean considering learning variability during initial planning. Research has shown that the problem lies not in the student but in the barriers created by the curriculum and learning environment (Hitchcock, Meyer, Rose, and Jackson, 2002). All students benefit from having multiple means of learning available that allow them to show their full potential. UDL creates a learning atmosphere that is accessible and equitable for all.

Often, UDL is misunderstood as useful only for children in special education, but flexibility in learning using the latest brain research is what all children need. UDL takes excellent teaching to a higher level by adjusting existing curricula and materials for multiple levels of learning and additional flexibility. It is not expensive to add more choices and flexibility to education, but the rewards for the students are priceless.

## The Research behind UDL

The rigor behind the UDL guidelines comes from evidence gained through years of research. UDL transforms education from the start with smart planning that incorporates a balance of support and challenges. It is not about making learning easier but about reducing unnecessary barriers to learning while continuing to work toward helping all children become expert learners. Instead of looking at the learners as the problem, the focus is on inflexible goals, materials, methods, and assessments (Hall, Meyer, and Rose, 2012). The guidelines are a significant shift from traditional education, which tries to fit the child to the curriculum rather than create a curriculum to meet children's needs.

UDL does not stop with lesson planning; this method looks at print accommodations; low, medium, and high tech; flexible seating; accessible environments; and behavior management. Advances in neuroscience have changed our understanding of how the brain works. “The notion of broad categories of learners as ‘smart–not smart,’ ‘disabled–not disabled,’ ‘regular–not regular’ is a gross over simplification that does not reflect reality” (Hall, Meyer, and Rose, 2012). Instead, a child’s ability is not static but constantly changing and interacting with their environment. The results of brain research show that the “average” student does not exist (Hall, Meyer, and Rose, 2012). “The concept of neuro-variability is important for educators because it reminds us that learners do not have an isolated learning ‘style,’ but instead rely on many parts of the brain working together to function within a given context” (CAST, 2018b).

The UDL concept started many years ago with Ronald Mace. He contracted polio at age nine and from then on, he set out to remove barriers that he found everywhere. He became an advocate for accessibility and was one of the people behind the Fair Housing Amendments and Americans with Disabilities Act of 1990 (Bowe, 2000). The act addressed the rights and needs of those with disabilities and prohibited discrimination based on disability in jobs, government programs, public transportation, stores, parks, and so on. A person using a wheelchair is no longer excluded from public buildings and job opportunities (Thornburgh and Fine, 2000). After signing this act, George W. Bush said, “Let the shameful walls of exclusion come tumbling down” (Thornburgh and Fine, 2000). Students in wheelchairs who couldn’t attend their neighborhood school, library, church, or store would finally be able to go without the challenge of barriers.

Ron Mace worked for the Center for Accessible Housing at North Carolina State University (NCSU), which was later called the Center for Universal Design. He pioneered the early work in UDL. “Ron Mace provided national leadership on accessibility” (Bowe, 2000). As an architect, Mace showed that putting universal design into the original building construction was cheaper and allowed for better accessibility than the costly additions required later to make buildings accessible. What started as a design for buildings has become the framework for accessible education (Bowe, 2000).

Another organization, the Center for Applied Special Technology (CAST), supports and researches UDL. The CAST approach is that designing more flexible learning environments will result in more effective learning. For example, developing and using technology to help children who are struggling to learn to read can also benefit other students. Interactive textbooks designed for children with special needs also offer learning opportunities that general-education students can use (O'Neill and Dalton, 2002).

UDL is recommended by the Every Student Succeeds Act (ESSA) of 2015, which replaced the No Child Left Behind Act. With further brain research, UDL will continue to evolve to meet changing educational needs.

## How UDL Looks in the Classroom

Every child has a profile of strengths and weaknesses. UDL uses that profile to adjust instruction and assessment to bring out a child's strengths by putting in place accommodations and modifications that give the child what they need to succeed. For example, a child who is very active could have a wiggle seat or weighted lap pad during circle time or work time to help him focus. He might not have any specific diagnosis, but by noticing a need and putting in place a plan to help the child, the educator is naturally utilizing the UDL method. Very simply, when an educator is flexible and puts into place what children need when they need it, more students will be successful.

> In observing a school with pre-K through third-grade classrooms, I saw the teachers guiding children toward their learning goals and expectations, I saw the children actively involved with highly motivating lessons. Very few children sat at tables or desks. Instead, they moved around, building vocabulary and exploring different materials or carrying a clipboard with paper attached for writing. The UDL guideline of multiple means of representation was evident in every classroom.
>
> I did not observe children being left out because of the different skill levels. The teachers implemented scaffolding and assistive technology so children could learn side by side. For example, a teacher had additional small visuals on a ring that she used to cue some students. Other accommodations included wiggle seats and other types of

seating. Some areas offered various kinds of lighting rather than bright fluorescent lights.

The children knew the teachers' expectations during the learning process. Visual schedules helped them understand what activities were happening when, and children used nonverbal signs to communicate everyday needs, such as using the bathroom. Teachers had transition routines, and the children knew exactly where to go next. One teacher sang the start of a song when it was time to line up or clean up and move to the next area or activity. Another teacher had a little chime light she lightly hit, and the musical sounds let the children know what was next.

I observed they had adapted storybooks, so children who needed more visuals had that support. Other children could enjoy the added pictures. It was evident that teachers used multiple representations to present the learning objectives. The teachers ensured the children could interact and show what they had learned in various ways. Best of all, there was a high level of student engagement and motivation for learning.

With the UDL mindset, children can flourish and have the opportunity to reach their potential without limitations. Every child has different learning variabilities. All children come to school with their own backgrounds and prior knowledge, making all learners unique.

## UDL in a High-Poverty School

Children in schools with a higher poverty level have challenges that other schools might not experience as often. These children may require different methods for student success. Challenges can include a lack of exposure to books, music, and arts. The children may never have traveled beyond

EDU048000

## UNLOCK THE POTENTIAL OF EVERY CHILD

As an early childhood educator, you want every child to thrive, regardless of their abilities or learning style. Universal Design for Learning (UDL) provides a framework for creating learning experiences that are inclusive and accessible to all children. In this comprehensive guide, you'll learn how to apply UDL principles to your early childhood environment to design a welcoming, engaging, and effective learning environment for every child. From designing flexible learning spaces to using technology to support diverse learners, you'll discover practical strategies and tips for implementing UDL in your classroom.

With real-world examples, this book shows you how to:

- create a classroom culture where children feel safe and comfortable.
- design and adapt materials for different learning styles and needs.
- use technology to enhance learning for all children.
- incorporate UDL principles into your daily routines and activities.
- collaborate with families and colleagues to support children's learning.

Whether you're new to UDL or looking to deepen your understanding and practice, this book will empower you to unlock the potential of every child in your early learning environment. Get ready to transform your teaching and create a more inclusive, engaging, and effective environment for all!

**Cindy Mudroch, MEd,** serves as a primary resource teacher in special education for Katy, Texas, ISD. She is also a professional-learning presenter and educational consultant. She earned her bachelor of science in elementary education and special education from the University of Wisconsin–Whitewater and earned a master's degree in curriculum and instruction from the University of Northern Iowa.

Gryphon House
www.gryphonhouse.com

GH 15909 U.S. $29.95

ISBN 9781636501161
52995 >
9 781636 501161