

Adaptations

Key: Adaptations in Inclusive Education

Definition

Young children with significant disabilities can achieve developmental and social gains when they are in inclusive settings. One of the key elements that leads to successful inclusion of young children is “*adaptation*”. Adaptation can be defined as the process of adjusting or modifying materials, environment, interactions, or teaching methods to support the individual child.

Adaptation, modification and accommodation are the terms being used interchangeably. However there are differences between these terms when they are considered in inclusive education. Adaptation is the umbrella term that includes both accommodation and modification. Adaptations allow children with disabilities to participate in inclusive environments by compensating for their weaknesses. Accommodations accomplish this objective without modifying the curriculum. Accommodations are changes that make it easier to learn for the child. It makes the change in how the child is learning, not what the child is learning. Accommodations don't lower the expectations for what children are learning. Accommodations may involve in presentation, response, setting or timing and scheduling of the given content. Some examples of accommodations for young learners may be picture schedules, directions with pictures, hearing aids or sign language, special or adapted seating, using Braille, communication devices, sitting near the teacher or paraeducator, noise buffers, such as tennis balls on chair legs to reduce noise, additional time to complete an activity, frequent breaks. In contrast, modifications refer to adaptations which change or lower expectations or standards. Modifications may include changes in instructional level, content/curriculum, performance criteria or assignment structure-paper/pencil work. For example, think of a five-year-old child with a disability is in a preschool classroom and there is a modification in content/curriculum. In the assessment of letter knowledge at the end of the year, he is required to know the letters in his name, whereas the rest of his class is required to know the entire alphabet.

Modifications and accommodations for a child with special needs is a continuous process which are decided by each child's collaborative team. Each teacher, each child, each classroom is unique and adaptations are specific to each situation. The first step is to assess the child's abilities and the environment where the child will be spending time. Once the goals and objectives are identified and expectations for the child's participation in that environment are established, the team selects or creates modifications and accommodations that address those needs and put them in the individual education plan. Once implemented, their effectiveness should be assessed on an ongoing basis and revised, as needed.

Purposes of adaptation in inclusive settings

Adaptations are essential elements of the practices that support young children in inclusive settings due to some reasons. Cross (2004) lists the purposes as

- Functional adaptations, which are related to children's most basic needs for health and safety, communication, positioning, and mobility, increase independence and reduce the need for one-on-one assistance.
- Adaptations to promote play, learning, and accomplish individual goals and outcomes are carried out to help children engage with the learning environment through play activities and more formal teacher-directed learning activities. The most frequent adaptations are the use of hand-over-hand to physically guide or support movement, and verbal prompts to encourage children's verbal or motor responses. Adults can also encourage peers to help children with hand-overhand assistance.
- Adaptations may also promote socialization. The development of social skills and friendships is an important part of early learning experiences. For example, adaptations ensuring interaction with other children during play, learning activities, and daily routines may encourage membership by positioning child within the circle on the floor with supports rather than outside the circle in the wheelchair.

Applications in educational settings

Young children have many different physical and learning needs in educational settings. A large number of these children are spending their days in classes including children having different abilities, interests, disadvantages or disabilities. For example, Jake has socio-emotional problems, Kate has hearing loss, Jamal has a speech delay, Asaam is just learning English, and Andy is growing up in poverty. These five children are only a few of the children in the classroom. Each child has strengths and challenges. Some of these children have individual education plans including modifications and accommodations according to their special needs. So there is a question that a teacher asks to herself:

"How can I meet the needs of all these children?"

The answer is not so easy. In the last two decades, the goal for educators has been to design educational settings that meet the needs of all learners within a common setting. So there is a need for educational practice that provides flexibility in the ways: information is presented, children are engaged, and children respond or demonstrate knowledge and skills; and reduces barriers in instruction, provides appropriate accommodations, supports, and challenges, and maintains high achievement expectations for all children, including the ones with disabilities and children who are limited English proficient (Higher Education Opportunity Act, 2008). These are the main ideas behind

Universal Design for Learning (UDL). The origin of the term UDL is generally attributed to David Rose, Anne Meyer, and colleagues at the Center for Applied Special Technology (CAST). Rose and Meyer (2002) reveal the basis of UDL is grounded in emerging insights about brain development, learning, and digital media. They observed the disconnect between an increasingly diverse children population and a “one-size-fits-all” curriculum would not produce the academic achievement gains that were being sought. Drawing on the historical application of universal design in architectural (e.g., curb cuts), CAST developed the concept of universal design for learning as a means of focusing research, development, and educational practice on understanding diversity and applying technology to facilitate learning. They explain there are three guiding principles of UDL which are:

- **Providing Multiple Means of Representation (the “what” of learning)**
Learners differ in the ways that they perceive and comprehend information that is presented to them. For example, those with sensory disabilities (e.g., blindness or deafness); learning disabilities (e.g., dyslexia); language or cultural differences, and so forth may all require different ways of approaching content. Others may simply grasp information quicker or more efficiently through visual or auditory means rather than printed text. Also learning, and transfer of learning, occurs when multiple representations are used, because it allows children to make connections within, as well as between, concepts. In short, there is not one means of representation that will be optimal for all learners; providing options for representation is essential.
- **Providing Multiple Means of Action and Expression (the “how” of learning)**
Learners differ in the ways that they can navigate a learning environment and express what they know. For example, individuals with significant movement impairments (e.g., cerebral palsy), those who struggle with strategic and organizational abilities (executive function disorders), those who have language barriers, and so forth approach learning tasks very differently. Some may be able to express themselves well in written text but not speech, and vice versa. It should also be recognized that action and expression require a great deal of strategy, practice, and organization, and this is another area in which learners can differ. In reality, there is not one means of action and expression that will be optimal for all learners; providing options for action and expression is essential.
- **Providing Multiple Means of Engagement (the “why” of learning)**
Affect represents a crucial element to learning, and learners differ markedly in the ways in which they can be engaged or motivated to learn. There are a variety of sources that can influence individual variation in affect including neurology, culture, personal relevance, subjectivity, and background knowledge, along with a variety of other factors presented in these guidelines. Some learners are highly engaged by spontaneity and novelty while other are disengaged, even frightened, by those aspects, preferring strict routine. Some learners might like to work alone, while others prefer to work with their peers. In reality, there is not one means of engagement that will be optimal for all learners in all contexts; providing multiple options for engagement is essential.

As explained, UDL applies the principles of universal design into education, resulting design of instructional materials and activities that allows the learning goals to be achievable by individuals having different abilities. Mason, Orkwis and Scott (2005) proposed the seven educational applications of UDL. These are:

- Equitable curriculum, which is designed to engage all children.
- Flexible curriculum, which accommodates a range of individual abilities and preferences.
- Simple and intuitive instruction, which provides instruction straightforward in the mode most accessible to children.
- Multiple means of presentation, which provides presentation to meet recognition patterns of individual children.
- Success-oriented curriculum, which is providing a supportive learning environment through ongoing assistance, applying principles of effective curriculum design by the teachers.
- Appropriate level of child effort, which means; accommodating different responses; ease of access to curricular materials; comfort; motivation and children engagement should be provided.
- Appropriate environment for learning which means curricular materials; instructional methods; groupings and classroom spaces should be varied according to the needs of the children.

In 2006, the term Universal Design for Early Childhood Education (UDECE), which was adaptation of the principles of Universal Design and Universal Design for Learning to the field of early childhood education, was explained (Conn-Powers, Cross, Traub and Hutter-Pishgahi, 2006). It provides a framework for synthesizing the fields of early childhood and special education. It designs early education settings so that all children, as equal and valued members of the program, may access and engage in all learning opportunities, learn from a common curriculum according to their individual strengths and abilities, and demonstrate their learning in multiple ways (Conn-Powers et al, 2006).

Three major principles of universal design for learning have been adapted by Pisha and Coyne (2001) to reflect an early childhood focus:

1. Learning differences occur at all levels so it is better to represent them as a continuum instead of in categories (e.g., children with disabilities, English as a Second Language, and typical development).
2. Anticipate learning differences and design curriculum to meet all learners' needs—rather than modifying a curriculum for some children.
3. Choose diverse and varied curriculum materials. Implement an open-ended curriculum—there should be more than one way to learn something, more than one way to show what has been learned, and more than one thing to learn.

Universal Design for Learning (UDL) is an approach that addresses and redresses the primary barrier to making expert learners of all children: **inflexible, one-size-fits-all curricula** that raise unintentional barriers to learning. Learners with disabilities are most vulnerable to such barriers, but many children without disabilities also find that curricula are poorly designed to meet their learning needs.

Diversity is the norm, not the exception, wherever individuals are gathered, including schools. When curricula are designed to meet the needs of the broad middle-at the exclusion of those with different abilities, learning styles, backgrounds, and even preferences, they fail to provide all individuals with fair and equal opportunities to learn. Universal Design for Learning helps meet the challenge of diversity by suggesting flexible instructional materials, techniques, and strategies that empower educators to meet these varied needs. A universally designed curriculum is designed from the outset to meet the needs of the greatest number of users, making costly, time-consuming, and after-the-fact changes to curriculum unnecessary.

Conclusion

Meeting the developmental and academic learning needs of all the children in a classroom is not an easy task. For early childhood teachers it is a challenge how to make sure that everyone benefits from a high-quality early childhood curriculum when they are given the wide developmental variations among typically developing children as well as the specialized intervention that children who speak other languages or who have identified delays and disabilities. Principles of universal design for learning help all educators to construct learning experiences that are meaningful for all young children, including those with diverse abilities. Using these principles, early childhood educators can design learning environments that are responsive to all young children's abilities, needs, and interests. By creating learning experiences that reflect a belief in multiple styles of learning, early childhood educators can effectively differentiate instruction and offer a variety of ways for children to represent their learning by also accommodating and modifying according to their needs. This child-centered approach to learning promotes the inclusion of all young children in the early childhood classroom.