Five guiding principles for understanding and applying child development knowledge

A comprehensive review of studies of child development reveals a few basic principles about how children typically grow and learn over their first eight years of life. The list of principles is not exhaustive, and may change as researchers develop more sophisticated technologies and methods for the study of children. However, there is a large volume of evidence gathered over many decades to support these principles.

**Principle 1:** Developmental domains are interrelated.

Child development is usually discussed and studied as separate domains, but in reality the domains are very much interrelated. For example, a baby's new-found physical ability to crawl (a milestone of physical development) means that she can now approach her caregiver on her own and initiate an interaction (social development) that provides her with more opportunities to listen to and mimic her caregiver's speech (language development).

Another example is that a four-year-old's difficulty with joining in play with other children (social development) can limit his experience with and practice of conversational skills (language development) and cause him to misread other children's responses as rejection or anger (emotional development).

Viewing the domains of development separately can be very helpful for assessment of what children know and are able to do at a given point in time. But when educators plan accordingly, it’s also important to remember that all of development is connected, with each aspect affecting the others.

**Principle 2:** Skills and knowledge are cumulative.

Providers who work in child care centers usually work with children in a relatively narrow age range. This sometimes leads the providers to believe that they only need to be aware of the developmental characteristics and milestones for the age of the children in their direct care. This approach ignores the developmental progress that came before those children enter child care.

Each step on a child’s developmental pathway depends on the steps taken before. Awareness of earlier developmental phases can be very helpful for providers when they plan for a new group of children or for a child who has not yet mastered a skill or concept that is typical for his age.

It is also critical to know that skills and concepts build on each other when professionals plan activities throughout the program year. Practice is necessary to learn and master new skills. Whether the new skill or concept is counting, crawling, negotiating during a disagreement, or navigating a tricycle, the more opportunities children have to practice, the more likely they will be to master that skill to the point of being able to move on to a more difficult skill.
Principle 3: Developmental trajectories vary across children and are uneven for individual children over time and across domains.

Development in each of the domains generally proceeds in a predictable pathway, or trajectory. But that doesn’t mean that each child will always follow that trajectory evenly. “Growth spurts” and the opposite, growth “pauses,” are easy to notice in young children’s physical development. But they are also common in every other domain of development.

Perhaps a child has been struggling, and failing, to grasp the concept of rhyming words. Then suddenly one day he “gets it!” and for the next several weeks he constantly rhymes the words he hears. Although it’s more difficult to see in the domains of emotional and social development, it’s safe to assume that there are also periods of slow and fast growth.

Child care providers also may notice that a surge in growth, or a heavy demand, in one domain sometimes corresponds with a growth “pause” or even a regression in other domains.

For example, often when toddlers are heavily focused on their developing sense of identity, trying to grasp who they are and what they are capable of on their own, they can also seem to make no progress and even lose ground on managing their own emotions and soothing themselves.

Sometimes circumstances can create a heavy emotional or social demand on a child that can result in delay or regression in cognitive, language or physical skills. For example, coping with the absence of a parent because of work, deployment, divorce or death places a heavy burden on a child emotionally and socially. It’s not unusual for a potty-trained child to have accidents, or for a child who can sound out simple words to lose that ability temporarily.

Principle 4: Child development knowledge is a starting point for providers to then add knowledge of the individual child in social and cultural contexts.

Knowledge of typical child development is a great starting point when environments and activities for a group of young children are planned. Much more needs to be learned about individual children in order to fully support their development. Children's expressions of what they know and can to do varies by individual temperament, personality, aptitude and interests. In addition, children’s development is influenced by early experiences, and those are shaped by the communities and cultures to which families belong.

For example, a child living in Minnesota has a different understanding of weather than a child living in Florida. A child who hears and learns more than one language at the same time may take a bit longer to reach each language development milestone than is typical for a child who learns only one. A child who lives in an urban setting with few opportunities for safe, active outdoor play may show different development of large motor skills than a child who has many opportunities to run, climb, and play outdoors.

These individual differences in children mean that in addition to their knowledge of typical development, child care providers need to learn as much as they can about the family of each child, through conversation and on-going relationships. This means they continually learn about each individual child: what she is interested in, how he interacts with others and the environment, what she knows at this time, and what he is able to do at any given time. This knowledge is gained through intentional observation and regular assessment.
Principle 5: Knowledge of child development has its limits.

Although a solid understanding of typical child development is valuable to child care professionals, it’s important to understand the limits of research-based knowledge. It can answer many, but not every, question about a child or children.

Research based knowledge describes the average, not the individual.

For example, if you measure the heights of 10 children who are all exactly 36 months old, you find a range of different heights. Add all of the heights together and divide by the number of children in the group (10 in this example group) to give the average height. Growth charts like the one below that show the height of typically developing children show the average of large groups for each age. An individual child’s height may be above or below the line and still be considered to be developing normally.

The same principle is true for all domains of development. Expectations for when a child says his first word, takes her first step, counts to 10, or reads simple words are all based on the averages. Averages are calculated from records of the actual ages of children in large groups as each child reaches each milestone. Age-based averages are meant to be a rough estimate of where a child should be in growth and development, not an exact measuring stick.