Vision and Your Child’s Development

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How do Babies Learn?

Two major theories of child development emphasize the role of vision

* Cognitive/constructivist theory (Piaget)
  + Children use their senses to collect information about objects and the environment
  + Children compare new experiences to previously acquired knowledge
* Social learning theory (Bandura/Vygotsky)
  + Observing and imitating caregivers to acquire new skills
  + Scaffolding – allowing a caregiver to assist, often with modeling

Vision Facts

* From 0-3, >85% of all learning occurs through observation and imitation
* Vision is a consistent, verifiable, and controlled distance sense
* Vision provides information as a “whole” (objects, people and environment)
* Vision helps children develop concepts
* Vision motivates children to develop and refine motor skills
* Vision provides an incentive for social interaction and communication
* Vision facilitates body image and perception

Project PRISM

* National Study on the Early Development of Children who are Visually Impaired (Ferrell et al., 1998)
  + 202 children ages 0-5 who had a diagnosed visual impairment
  + 60% had additional disabilities
* Conclusions:
  + The majority of milestones were delayed in comparison to children with typical visual functioning
  + A portion of milestones tracked with same-age peers
  + A portion of milestones were acquired in a different sequence than same-age peers
  + The existence of additional disabilities had a greater effect on development than the severity of the visual impairment

Developmental Domains

* Visual impairment affects skill acquisition in all developmental domains
  + Cognitive
  + Motor
  + Adaptive
  + Social
  + Language

Cognitive

* Concept development
  + Concrete (objects and how they are used)
  + Characteristics (shape, size, same/different)
  + Abstract (colors, emotions)
  + Parts to whole
* Object permanence
* Object constancy
* Cause/effect
* Problem solving
* Symbolism
* Imagination

Suggestions

* Use concrete objects
* Understand that your child learns from parts to whole
* Think of a concept/activity from the child’s point of view
* Give the child extra time to respond
* Use specific directional concepts (“on your left side”, rather than “over there”)
* Use past experiences to make connections to present concepts
* Provide as many experiences as you can

Julia’s Lessons – Cause/Effect

* Wrist Rattle
* Coffee Can Crush
* Modified Coffee Can Crush

Sara’s Lessons

* Bead Pull (cause and effect/purposeful play)
* Matching and Sorting Activities (textures, function, size, shape, color)

Motor

* Fine Motor (grasp, reach, release, wrist rotation)
* Gross Motor (head control, bearing weight on hands and legs, rolling)
* Challenges
  + Motor limitations/physical challenges
  + Muscle tone (high or low)
  + Observing others’ movements and imitation (incidental learning)
  + Motivation
  + Feeling fearful/cautious/hesitant

Suggestions

* Use auditory or scent cues to motivate movement
* Use tactile cues around the home
* Incorporate hand under hand guidance to model small movements
* Let them feel larger movements (walk on feet)
* Use descriptive language about the environment
* Receive an Orientation and Mobility assessment if possible
* Use age appropriate walk behind toys
* Make motor movement fun
* Provide encouragement and comfort
* Use an active learning environment/stay-put materials

Sara’s Lessons

* Texture Mats – motivate movement with tactile and/or auditory feedback
* Scent Bottles – motivate gross and fine motor movement (squeeze for scent)

Julia’s Lessons

* Emergency blanket for visual, tactile, and auditory feedback
* Vibration – gross or fine motor motivation

Adaptive

* Feeding
* Dressing
* Toileting
* Self-care
* Challenges:
  + Observing others social behavior and motor actions while eating
  + Concepts of different clothing items and where they are stored
  + Sensory issues related to feeding and dressing
  + Imitation of caregiver’s self-care routines
  + Motor limitations

“Reach Out And Teach” Strategies

* Practice skills as they occur during daily routines
* Think though the steps (task analysis)
* Try it yourself without using vision
* Recognize the “teachable moment”
* Be consistent
* Work from behind
* Decrease help gradually
* Let your child help with daily tasks
* Give lots of time
* One more – use partial participation and adapt the activity to your child’s abilities

Julia’s Lessons

* Pulling/kicking off socks (visually motivating)
* Attribute tray of spoons while caregiver is cooking

Sara’s Lessons

* Activity Boards – focus on specific skills
* Daily Tasks – age appropriate “chores”

Social

* Growing relations between the child and the world
* Begins in infancy with awareness of “I-you”
* Challenges
  + Lack of eye contact
  + Unaware of social cues
  + Observation of others and what is happening around them
  + Instruction of necessary skills to interact with people and understand the world

Suggestions

* Seek other forms of recognition to enhance bonding
* Teach your child to face others when they are speaking
* Provide experiences so that your child can:
  + Initiate interactions with other children
  + Invite others to play
  + Understand how to join others at play
* Encourage dramatic, functional, and imaginative play
* Promote frequent and diverse social interactions
  + Learn how body mannerisms and language affect others

Sara’s lessons

* Social games (rolling car/ball back and forth)
* Turn taking/Imitation (building and knocking down towers of blocks)

Julia’s lessons

* Drumming/banging (active learning sequence – offering, imitation, interaction)
* Co-active movement (rock your body or row the boat)

Language

* Begins when actions are represented symbolically
* Language and cognitive work together
* Challenges
  + Repeat words/phrases without proper understanding
  + Difficulty knowing who is being referred to (you, me, he, she, it)
  + Lack of visual input may impact understanding and describing events

Suggestions

* Connect events with words/descriptions
* Provide language rich experiences
* Provide family talk time to help develop social language and expand child’s understanding
* Story time (expands vocabulary and introduces new concepts)
* Add meaningful objects to replace pictures (story boxes, story bags, story dangle bars)

Sara’s Lessons

* Mystery Box
* Texture Exploration (books, boxes, cards)

Julia’s Lessons

* Scent-based story box (for all abilities)
* Alphabet scavenger hunt

Supporting Families

* They know their children best
* They have many opportunities for repetition and practice
* The natural environments are the best places for learning
* They are the child’s primary role model (and so are siblings!)

Questions?

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Upcoming Trainings and Recorded Webinars

* IDHS: Calendar of Events (state.il.us)
* IDHS: Recorded Webinars (Credit available) (state.il.us)

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