

Development through Play

PLAY IN THE BIBLE

Prophecy - Zechariah 8:5

Zachariah prophesized about play, "The streets of the city shall be full of boys and girls playing in its streets." This tells us that natural play has been an important stage in child's development. Play is an instinct that God has set into human development.

Apostle Paul - 1 Corinthians 9:24-27

Apostle Paul uses recreation as an example for self-discipline. He uses running a race (creates imagery) because it is something that will be understood by others. Very often Paul compares physical development to spiritual growth.

David - 1 Samuel 16-17

Growing up, David developed through play and recreation. He grew up in the fields tending sheep, but also learned how to play Lyre, learned poetry, and other skills that allowed him to overcome not only a bear and a lion, but also Goliath. David used recreation to worship God throughout his life. During that time, as a shepherd, he developed characteristics such as kindness, courage, humility, faithfulness, etc.

DEVELOPMENT THROUGH PLAY

At birth, child's brain contains about 100 billion neurons. When stimulated, neurons form connections (synapses) through which the cells communicate with each other. Synapses that are used most, become permanent. During this process, the more areas in our brain are activated, the stronger the connections are. Our senses stimulate this activation.

Brain eliminates synapses that are seldom used. Neurons that do not form any synapses through stimulation also die out. This process allows the brain to create strong circuits that are interconnected.

The goal is to build strong and fast communication system between neurons, resulting in strong motor skills, visual, language, memory, emotions, and behavioral control.

If a child receives little stimulation, synapses will not develop resulting in fewer connections, which means less skills and knowledge. **Our goal is to provide as much stimulation as possible to give the brain an opportunity to build those connections.** Play can provide stimulation in different areas in the brain at once which helps the brain develop stronger connections in different lobes (areas) of the brain. Therefore, by nature, all kids start their development through play.

Physical Development

1. Development of Gross Motor Skills: (Development of bones and muscles)

Control of the arms, legs, head, balance, and coordination. Activities that develop Gross Motor Skills include running, jumping, hopping, throwing, catching, climbing up, down, over, under and through things, pedaling, push and pull, dump and fill, and more.

2. Development of Fine Motor Skills: (Hand-Eye Coordination Skills)

Careful control of small muscles in the hands, feet, fingers, and toes. Also controlling the muscles of the tongue and lips to speak or sing. Art and craft activities that use playdough, clay, scissors, cookie cutters, blocks, beads, puzzles, art materials, and other arts and crafts equipment help develop Fine Motor Skills.

3. Development of Sensory Integration

The processes by which we receive information through our senses, organize this information, and use it to participate in everyday activities.

- Development of the most common senses: sight, hearing, smell, taste, and touch.
- The vestibular sense (movement and balance): gives us information about where our head and body are in space. It allows us to stay upright while we sit, stand, and walk. Activities that include rocking, sliding, swinging, swimming, spinning, balancing, rolling, bouncing, and more.
(Steppingstones, hopscotch, sports like basketball, baseball, Frisbee, dancing, etc.)
- Proprioception sense (body awareness): tells us where our body parts are relative to each other and gives us information about how much force to use in certain activities. Activities include

carrying heavy objects, push-ups, jumping on trampoline, hand clapping, climbing, and other.
(Crab walk, Tug of war, pillow fights, etc.)

4. Brain Growth

Active play stimulates nerve growth in the amygdala (where emotions get processed), the dorsolateral prefrontal cortex (where executive decisions are processed), frontal cortex (responsible for cognition), and cerebellum (responsible for coordination, motor control, attention, language processing, and more).

Emotional Development

Emotional Intelligence: the ability to perceive others' emotional state, and to adopt an appropriate response. Most common skills include Self-Awareness (understanding your emotions and intuitions), Positive Self-Image, Self-Regulation (controlling your emotions and intuitions), Motivation, Empathy (understanding the wants, needs and viewpoints of others), and Social Skills. (Ro-Sham-Bo, etc.)

Social Development

Facilitating interaction and communication with others.

Good social skills require effective listening, understanding, being able to initiate a conversation, problem solving, apologizing, empathy, cooperation, habits of fair play and good sportsmanship, and more. Playing icebreakers and team-building games is a good tool in developing emotional intelligence and social skills. (Staring contest to more complicated games that involve more people)

Cognitive Development

Cognitive development includes memory, concentration, attention, perception, imagination, creativity, problem solving and decision making.

Result: better academic performance and higher IQ.

- *The University of North Carolina's Early Child Intervention program found that children who received an enriched, play-oriented parenting had a higher IQs at age five than did a comparable group of children who did not receive play-oriented parenting.*

- *Studies conducted in French and Canadian elementary schools over a period of four years found that regular physical activity had positive effects on academic performance. Spending one third of the school day in physical education, art, and music improved not only physical fitness, but attitudes toward learning and test scores.*

Reaches all 4 types of learners

1. Visual Learners – learn by seeing and visualizing.
2. Auditory Learners – learn by listening and verbalizing.
3. Read-Write Learners – learn by silently reading or writing notes.
4. Kinesthetic Learners – learn by doing and solving real-life problems.

Intrinsically Motivating

1. Intrinsic Motivation - Motivation arises from within the individual (Students learn for themselves).
 - Students want to learn.
 - Students enjoy their activity; no force is needed to involve a student in an activity.
 - Long-term development strategy.
 - Involves: Games, Fun Activities
 2. Extrinsic Motivation - Motivation arises from outside the individual by external rewards (students learn for a reward).
 - Induces immediate effort and attention.
 - Short-term goal.
 - Motivated through rewards and punishments, need a “push” in learning to complete an assignment. EX: points, awards, candy, stickers, and more.
- *Cameron and Pierce (1994) examined more than 150 studies about the effect of extrinsic awards and intrinsic motivation. The study concluded that when students are rewarded for completing a task, such as winning a prize, or getting points, intrinsic motivation decreases.*

As a leader your goal is to help students learn through intrinsic motivation by creating an intrinsically motivating environment by replacing reward with love, providing intriguing games and activities, being an example by getting involved in games and activities with your students.

EFFECTS OF MODERN PLAY

The national survey "American Life Project" shows 97% of age 12-17 play video games. From those 97%, 99% are boys and 94% are girls. Average 8- to 10-year-old spends almost 8 hours a day with a variety of media. Older children and teenagers spend around 11 hours per day with media.

Addictive

Rewards in video games, trigger the reward system in the brain to release dopamine hormone which feels good. While playing video games child experiences higher levels of adrenaline, the game stimulates visual and sound senses, being visually pleasing with good graphics and high levels of contrast and having good sound effects.

Negative Effects

Some of the negative effects caused by playing video games include decreased attention span, increased aggression, reduced self-soothing and self-regulation skills, risk of depression and anxiety, reduced physical activity, risk of obesity, problem with digestive system, decreased school performance, decreased interpersonal interactions, etc.

Sympathetic Nervous System vs. Parasympathetic Nervous System

1. Parasympathetic NS: Rest and digest, returns the body to a calm state, decreases heart rate and blood pressure, repairs the body, etc.
2. Sympathetic NS: Fight or flight, prepares the body for stress, releases cortisol and adrenaline, increases heart rate and blood pressure, decreases digestion, etc.
 - a. Eating disorders - parasympathetic system at rest while sympathetic system (fight or flight response) is activated.
 - b. Sleeping disturbance - high levels of stress
 - c. Behavioral issues - aggression, impulsivity, inappropriate language/jokes
 - d. Takes on average 20-60 minutes to regulate stress levels.
3. Effects of screen time on school progress: *A study, completed by Medical Research Council at Cambridge, revealed that those kids that get an hour plus screen time, perform worse in schools.*

Positive Effects

Some of the positive effects of video games include visual-spatial skills, multi-tasking skills, decision-making skills, problem-solving skills, educational games help children learn, etc. Games are intrinsically motivating, making video games a great classroom tool.

WHAT CAN WE DO?

Considering the positive benefits of play, including video games, we can use these benefits as a tool in our ministry by incorporating technology in our Sunday school lessons, creating visually appealing visuals, incorporating music, sounds and sound effects into our lessons, incorporate natural play in our classrooms and use reward systems.

RECOMMENDED RESOURCES

Child's brain on video games explained in 4 minutes - "This Is Your Child's Brain on Videogames | WSJ"

YouTube: https://www.youtube.com/watch?v=fi6596_RUNQ

Books – Collection of games for lessons and Bible stories.

1. Fill the Gap by Rebecca Parkinson [Fill the Gap!: 120 Instant Bible Games for Sunday Schools and Midweek Groups: Rebecca Parkinson: 9780857460042: Amazon.com: Books](#)
2. 101 Great Games for Kids by Jolene L. Roehlkepartain [Amazon.com: 101 Great Games for Kids: Active, Bible-Based Fun for Christian Education: 9780687087952: Jolene L. Roehlkepartain: Books](#)
3. The Encyclopedia of Bible Games for Children's Ministry [The Encyclopedia of Bible Games for Children's Ministry: Group Publishing: 9780764426964: Amazon.com: Books](#)

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