

# Qatr an-Nada

A Special Issue  
on the Learning Brain

Issue 11, summer 2007

Towards a Fair Start for Children in the Arab World

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HOW DOES A BRAIN LEARN?  
HOW DOES A CHILD LEARN?

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## From Innocent Joy to "Slaughtering Pigeons"

A human being's experience with music starts with incomprehensible rhythms. Some are scary, while others are sources of comfort and security. Of the second type is the voice of a mother, singing a lullaby she inherited from her mother, or one she improvises. An infant is not concerned with words, which he/she does not understand but with the tone and the warmth of the mother's arms, which get the infant to have sweet dreams. Father Youssef Muwannes, who bears a PhD in anthropology, believes that lullabies are characterized by simple music, usually made up of no more than three notes, and a vivid imagination by the spontaneous and generous mother.

He analyzes a common and controversial lullaby: "Sleep, dear, sleep. I will slaughter a pigeon for you. Oh, pigeon. Don't you believe it. I'm cheating my son into sleeping." Muwannes believes that this lullaby relies on an innocent lie to encourage the infant to sleep by promising him/her a slaughtered pigeon. And despite the toughness of the word "slaughter" and the violent image it carries, the lullaby expresses a specific environment and popular heritage. It seems pigeons were the most expensive gift a mother could offer her infant. Thus, by promising to slaughter a pigeon if her infant went to sleep, she expressed her love for him/her, he says. Also, when this lullaby was famous, mothers did not buy meat from supermarkets; they slaughtered birds themselves. This made slaughtering a daily home task.

Bella Aoun, a psychotherapist, argues that lullabies or songs that bear vio-

lence and brutality, such as mentioning the slaughter of children, stimulate fear and hostility in children who understand these words literally, not in the context of their inherited traditions. She says such images stay long in the memory. When an adult sees a slaughtered cow, he/she remembers the preliminary feeling of fear, sometimes closing his/her eyes as a spontaneous reaction.

Children sing and dance; this means they are happy. But do children need music more than adults do? Ahmad Qaabour, a composer with a rich repertoire of children songs, says, "Children songs should carry above all aesthetic and human values. Orientation, education and guidance are matters of family and school, while the mission of songs and plays is to help children answer their questions and to cut through their worlds and concerns." He gives the example of Hassan Abdullah, a poet and novelist who wrote several stories for children. "Simplicity isn't simple. In Walt Disney movies, for example, a huge orchestra plays music. Renowned composers and singers are re-cruited," he adds. "But in our Arab societies, simplicity is mistaken for absurdity."

Dana Beydoun, Al-Hayat newspaper, 3/5/07

## Exploiting Children in Songs for Adults

"Young, wicked and spoiled." Three superficial characteristics, expressed in implying movements, are the main features of songs addressed to children in the Third Millennium.

A youngster freezes before the screen, watching the movements of Haifa Wehbi, and imitating her words and movements. She and other singers seem to target a new group of viewers to gain

more fame, irrespective of the values and ethics of upbringing.

The most alarming aspect to some educationists may be the fact that children tend to imitate adults, including some of their "unethical" actions on television and some-where else within the framework of "children songs." Parents worry about warning their children about "adult" things.

Ramzi Haroun, an educational science professor, argues that songs "help in teaching and educating children and help them assimilate behaviors and values, such as cleanliness, respect of others and patriotism."

Jordanian composer and researcher Wael Abul-Suud stresses in a study the psychological, social and cultural importance of songs that accompany the playing of children. "Music develops the child's talents, mental abilities and kinesthetic skills. Also, musical playing develops in children participation, belonging to a group, taste and personality by encouraging their feeling of their region's special culture."

Leila Khalifa, Al-Hayat newspaper, 3/5/07

## Street Children: From Negligence to Confrontation

Sentencing al-Turbini and Hanata to death in Egypt temporarily calmed down millions of Egyptians. They were relieved to see the two young men, who were convicted of raping and killing tens of street children, face punishment. However, the suffocating problem of street children is yet to be solved.

Ramadan Abdel-Rahman Mansour, a.k.a. al-Turbini, and his assistant, Mohammad Faraj, a.k.a. Hanata, raped



Caricature by Ahmad Khatib

and killed at least 30 street children in seven years. They were arrested in December 2006. Unveiling the crimes of al-Turbini, who has scary, penetrating looks, unveiled the fact that thousands of children fill the streets of Cairo and some Egyptian cities. They have become a usual thing; people seem to neglect them as if they do not exist.

Egyptian officials have long been silent about the problem, claiming that responsibility is elsewhere. A few years ago, they denied the problem existed or tried to justify it. And despite efforts by organizations, such as the National Council on Childhood and Motherhood and UNICEF, most people and officials thought the problem was "blown out of proportion," "exaggerated" or "marginal" and not even a priority.

Some analysts believe that dealing with this problem will remain incomplete as long as the reasons why children take to the streets are not handled seriously. Such reasons include poverty, family breakup, inefficiency of the educational system, and absence of political, religious or cultural role models. Observers worry about the second generation of street children, who are being born to street mothers and fathers.

Amina Khairi, Al-Hayat, 25/5/07

## Amman's First Children Museum

"Your children are not your children. They are the sons and daughters of Life's long-ing for itself." With this quote from Kahlil Gibran, Jordan's Queen Rania Abdullah inaugurated a special museum for children in Hussein Gardens, Amman.

The museum hosts more than 150 interactive and biological items, and provides original and modern programs that encourage creativity. Its main topics – the human body, technology and Nature – gave the display hall a special character. Subtopics include health, fitness, astronomy, geology, environment, civilization, light, optics, mathematics, atmosphere and aviation; children can experiment with every one of these.

The museum includes external gardens and open spaces including specialized items about water, travel, trips, sciences, theater, games and others. It provides learning opportunities through playing to children less than three.

The museum summarizes a whole

world, a world that gives children a chance to discover and participate in interactive activities, such as reassembling a dinosaur, flying a plane very much like real planes and flying a bee during its collection of pollen.

The museum includes a theater where children can hold concerts and plays.

Haneen Ahmar, Al-Hayat, 25/5/07

## London Arab Schools Wonder How to Develop Skills

The Federation of Arab Schools in London, as part of its cultural activities, held a workshop that sought to find answers for three questions: How do we discover our children's abilities and intelligence? How do we deal with them through their abilities and intelligences at home? How do we deal with them through the different types of intelligence?

Dr. Mohammad Abdel-Razeq said, "The education profession has developed; it doesn't rely on rote anymore. It has developed in terms of presentation, understanding and assimilation." He defined intelligence as "a general ability resulting from interaction between heredity and environment factors and helping the individual solve problems he/she faces in life."

In his lecture, he recalled eight types of intelligence as classified by Howard Gardner (naturalistic, visual, logical, interactive, kinesthetic, musical, personal and linguistic), adding a ninth: emotional intelligence.

Middle East Online, www.meo.tv

## Superheroes Threaten Children's Lives

Many parents by their children the outfits of superheroes, presented in movies as human "legends." They want to make their children happy.

Yet, some specialists warn that buying children such outfits, to look like Spiderman or Batman, before advising them against trying to imitate superheroes may put children to dangers with possible dangerous consequences.

A recent scientific report argued that an average child has a vivid imagination that helps the child develop in a healthy manner. It is unacceptable to neglect imagined abilities that the child bestows upon himself/herself and

are part of his/her natural tendency to take risks.

The report warned against the spread of the outfits of superheroes that appear on tele-vision to be able to fly or leap over towering buildings by just wearing their special outfits. Children may believe that the secret to the powers of these characters lies in these outfits.

The authors said children's adoration of such superheroes could be a tool to develop other aspects of their personalities, such as focusing on the ethics of such characters and their fight against evil. Such superheroes can be shown to be special because they like to do the right thing, not thanks to their supernatural abilities. Children must be praised when they try to imitate superheroes hereof.

Good parental guidance and orientation help give children their chance to be superheroes, as they want – without supernatural characteristics.

Middle East Online, www.meo.tv

## Poverty Is the Main Reason for Child Labor Children Amount to One Third of Agricultural Labor

The UN Food and Agriculture Organization (FAO) said that 132 million children, between five and 14, work in agriculture around the world. This situation deprives them of education and exacerbates poverty, it added during its launching of a new partnership to combat this phenomenon. A FAO official said, "Children comprise one third of agriculture workers," adding that "22,000 child laborers die annually" in accidents or diseases related to agricultural work.

FAO, on the World Day against Child Labor, launched a new partnership to combat this phenomenon with the World Labor Organization and the International Federation of Agricultural Producers.

FAO's Eve Crowley said, "Child labor is a new issue being handled by FAO, which mainly deals with curbing poverty and hunger in the world."

FAO says the main reasons of child labor are poverty, claims of some employers that children are better equipped than adults to harvest some produce, and the absence of schools in rural areas.

Middle East Online, www.meo.tv

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# The Multiple Intelligence Theory

## What's the Type of Your Child's Intelligence?

Are politicians more intelligent than clerics? Are bankers more intelligent than artists? Are intellectuals more intelligent than factory workers? Are children more intelligent than parents? How do we measure intelligence? If intelligence is a human being's accommodation with living conditions (both biological and social), all these people are intelligent some way or another. Anyone in any particular group, who managed to invest the abilities that are available to him/her the best possible way, can be considered intelligent. This way, a successful footballer is as intelligent as a physicist.

**Dr. Fadia Hoteit**

Early childhood professor at the Lebanese University's Education Faculty

When students hear this, they start asking: Are all these people intelligent? Is someone who used their brain like someone who used their foot, body or intuition? I noticed that answers are not easy because longstanding stagnant beliefs must be broken hereof. Such beliefs put intellectual abilities before any others and rank manual abilities the lowest. Emotional abilities are not included at all.

### Types of Intelligence

Gardner's theory includes seven types of intelligence. These intelligences and related abilities and activities can be summarized as follows:

1-Linguistic/pronunciation intelligence: Excellence in using language and interest in reading, writing, narration and discussion activities. People in this category include writers, poets, journalists, orators, etc.

2-Mathematical/logical intelligence: Excellence in studying mathematics, solving problems, posing and testing theories, classifying things, using abstract concepts, etc. People in this category include mathematicians, geometry specialists, etc.

3-Visual/Spatial intelligence: Excellence in using the space in all forms; reading maps, tables and plots; imagining areas; etc. People in this category include plastic artists, engineers, decorators, etc.

4-Bodily/kinesthetic intelligence: Excellence in using the body in sports, dancing, theater, handicrafts, etc.

People in this category include athletes, dancers, actors, etc.

5-Musical intelligence: Excellence in identifying sounds, tasting notes, remembering music and expressing oneself with music. People in this category include composers, singers, musicians, etc.

6-Interpersonal (social) intelligence: Excellence in making and strengthening positive relations with others, interacting with and understanding people, playing leading roles, and solving problems between individuals. People here include leaders of political parties, labor unions and tribes, as well as comedians.

7-Intrapersonal intelligence: Excellence in knowing yourself and contemplating its components. People in this category include self-contemplators, psychoanalysts, etc.

Gardner and fellow researchers broke up these types into subcategories, coming up with 20 types of intelligence. For example, they broke up interpersonal intelligence into four abilities: leadership and developing relations, keeping friends, resolving conflicts and social analysis. People enjoy more than one type of intelligence, with each type affecting the other. As intelligences increase in scope and number, a person becomes excellent in fulfilling tasks. For example, if someone's intelligence is bodily (an athlete), they will do better if they are good in social relations and even better if they know well themselves and their strengths and weaknesses and how to act accordingly. Thus, it is important to deal with many types of intelligence, even if a person has excelled in a specific domain. Developing other intel-

ligences enhances excellence in one. This is especially true in young children: at their age, their creative tendencies are not final and clear-cut. All such tendencies must be developed until the child shows excellence in some.

### How Does Our Intelligence Develop?

But why does someone show excellence in a certain type of intelligence? Is intelligence an outcome of our biological constitution? Or is it a result of education?

Gardner believes that both biological and cultural factors play a role in the formation of our talents. Biological research shows that education is a result of changes to neurological links between cells in various parts of the brain, each part being responsible for a certain type of education. Social studies show that cultural factors focus on and highlight certain aspects of education more than others, pushing learners to put more efforts hereof.

### The Multiple Intelligence Theory and Education

#### Learning Methods

Intelligence Types Learning Methods

Linguistic/pronunciation Reading, listening, summarization, understanding oral and written texts.

Mathematical/logical Using and moving things to understand quantity, time and causality; solving problems logically; understanding educational forms, relations and charades; collecting data; making strong arguments.

Visual/Spatial Watching, observing, drawing  
 Bodily/kinesthetic Touching, moving, coordinating and timing, participating and committing, playing roles  
 Musical Learning from sounds, discussing music and its meanings, singing and playing, composing  
 Interpersonal Social interactions and relations, cooperating, understanding oral and non-oral methods  
 Intrapersonal Knowing personal emotions, various expressions, setting and following up personal goals, curiosity about major issues, developing insights

## Method and Application








The branching education method, or “curriculum wheel,” seems a good tool to implement the multiple intelligences theory in little children’s classes. Follows is an example for kindergarten:  
 By taking into consideration multiple intelligence aspects, teachers can prepare a rich education strategy and organize a classroom environment that is in line with the various tendencies of children. Naturally, children will take part in various available activities, but some activities will interest children more than others.

## Evaluation

The multiple intelligences theory allows a more effective way to evaluate children: we can support children’s strong points and work on improving weak points. But children should not be quickly given vocational labels; we should not say a child would be a writer, an engineer, a musician or an artist. Skills may come and go, while weak skills may improve with time. The main goal of the evaluation process should be to help children enhance their abilities and excel in their skills. Later, they will be able to take suitable courses in life.

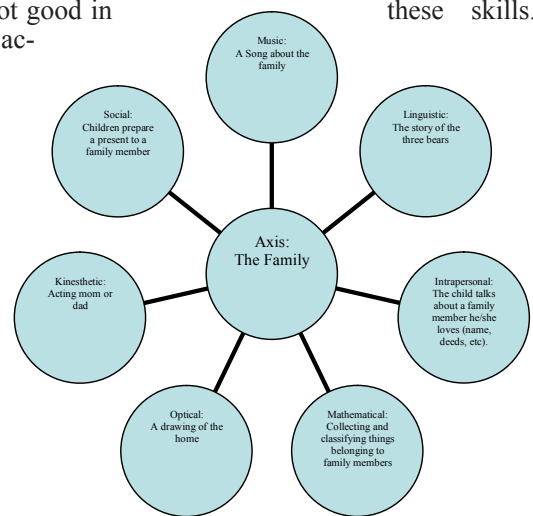
## Summary

Traditional education focuses on linguistic and logical/mathematical skills. Children are often said to have “learning

Intelligence Types	Learning Methods	
Linguistic/pronunciation	Reading, listening, summarization, understanding oral and written texts	
Mathematical/logical	Using and moving things to understand quantity, time and causality; solving problems logically; understanding educational forms, relations and charades; collecting data; making strong arguments	
Visual/Spatial	Watching, observing, drawing	
Bodily/kinesthetic	Touching, moving, coordinating and timing, participating and committing, playing roles	
Musical	Learning from sounds, discussing music and its meanings, singing and playing, composing	
Interpersonal	Social interactions and relations, cooperating, understanding oral and non-oral methods	
Intrapersonal	Knowing personal emotions, various expressions, setting and following up personal goals, curiosity about major issues, developing insights	

difficulties” because they are not good in these skills. On the other hand, teaching according to the multiple intelligences theory helps teachers discover creative aspects in all children and improve their evaluation. It is a fact that good expectations enhance children’s learning.

It is wrong to ask, “Is this child intelligent?” One should ask, “What’s his/her type of intelligence?” Let children lead us to know them and prepare a good, enticing and enjoyable environment for them. We will discover that each is a skillful human being in the making.



## References

Explanations of the theory can be found on several websites.  
 In English:  
<http://www.caslt.org/research/reflexions1999.htm>  
<http://www.parenting-baby.com>  
<http://www.howardgardner.com/Papers/documents/T-101%20A%20Multiplicity%20REVISED.pdf>  
<http://cnx.org/content/m13287/latest>  
<http://www.naeyc.org/ece/1997/13.asp>

In French:

[http://www.careerccc.org/products/cp\\_99\\_f/section1/step3.cfm](http://www.careerccc.org/products/cp_99_f/section1/step3.cfm)  
<http://www.syre.com/Multint.htm>  
[http://fr.wikipedia.org/wiki/Théorie\\_des\\_intelligences\\_multiples#searchInput](http://fr.wikipedia.org/wiki/Théorie_des_intelligences_multiples#searchInput)  
[http://www.careerccc.org/products/cp\\_99\\_f/section1/step3.cfm](http://www.careerccc.org/products/cp_99_f/section1/step3.cfm)

In Arabic, our main source:

[http://www.ibtikar.ac.ma/modules\\_meg/centration/cent1/1256/2000cadre\\_cent1.htm](http://www.ibtikar.ac.ma/modules_meg/centration/cent1/1256/2000cadre_cent1.htm)

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## Is the Knowledge of Brain Parts and their Functions Important in Education?

# How Does the Brain Learn?

We are at the threshold of a revolution. It is about applying new important research findings about the brain in learning and teaching. Brain research may not decide which teaching strategy is best, but the information it provides is basic in decision making in schools and classrooms. For example, brain scans show that frontal lobes in a reading brain are much more active in silent reading than in loud reading. Activity in frontal lobes is mostly an indicator of superior thinking skills. In loud reading, scans show major activity in that part of the brain that is responsible for motion and that regulates speech. Such information can have educational connotations: understanding is higher in silent reading. This does not mean, of course, that loud reading should be stopped, but teachers should balance silent and loud reading to measure understanding and spelling, whenever needed.

**Rana Ismail,**

principal of al-Kawthar High School, al-Mabarrat Association

### I- The Beginning: The Cell

The human body is made up of cells. Brain cells are of two types, neurons and glial cells. To understand a learning brain, we have to explain how the work and functions of brain cells.

#### A- Neurons

Neurons make the brain an organ of learning and thinking. An adult has 100 billion neurons, while a two year-old child has double that number. The reason is that people lose brain cells every day because of friction, deterioration and lack of use. Neurons are different from other body cells in two basic aspects:

One: Neurons, unlike other cells, do not reproduce in a programmed and organized way. That is why, when we hurt ourselves, the wound heals in a matter of days or one week thanks to the reproduction of muscle and skin cells. But when the brain suffers a stroke or an accident, damaged cells do not renew themselves the same way. New research shows that an adult's brain can produce new cells, but this process and the role of the new cells are still under study.

Two: Neurons can transmit information.

They are interconnected into networks or connections through electrical signals and chemicals (Figure 1). The term neuron is derived from a Greek word meaning wire. Neurons are only 10 percent of brain cells, but they are basic for the brain's function.

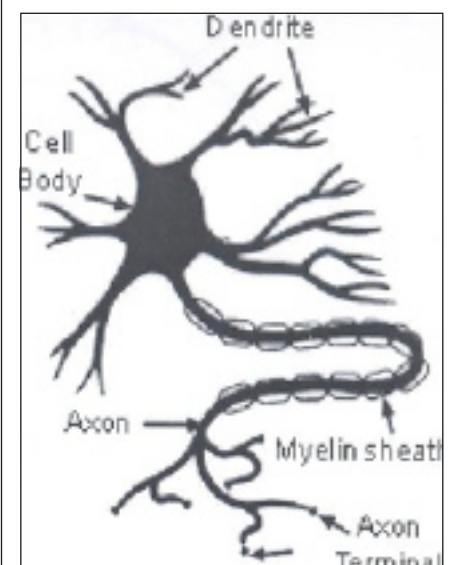
A neuron is made up of a cell body, a dendrite and an axon. The dendrite receives information from other neurons, while the axon transmits information to other cells. Thus, dendrites are receivers and axons transmitters. Each neuron has an axon with ramifications at its end called axon terminal.

#### B- Glial Cells

Around 90 percent of brain cells are glial cells. A human being has 1,000 billion such cells. A glial cell is different from a neuron; it does not have a cell body. Glial cells are of several types with different functions: sustaining the brain's blood, carrying nutrients, regulate the immunity system, eliminating dead cells, and giving structure to the brain. (Figure 2)

### II- The Brain's Parts

Learning starts with neurons, thus, it is important to know how they work. And to do so, we have to know the brain parts where these cells are. These parts are: 1-Medulla oblongata: Sometimes called the lower brain, the medulla oblongata is responsible for involuntary functions, such as breathing, heartbeat and blood pressure.



2-Cerebellum: Also called the small brain, the cerebellum is linked in traditional studies to functions such as balance, posture, coordination and muscle movement. Modern studies link it to thinking, novelty and emotions.

3-Thalamus: A basic sensory relay station, the thalamus is an important part of the body's balance system. It plays an important role in regulating perception and other vital body functions.

4-Hypothalamus: A complex system similar to a thermometer, the hypothalamus affects and regulates appetite, hormone secretion, digestion, the sexual system, blood circulation, emotions and sleep. It plays an important role in regulating perception and other vital body functions.

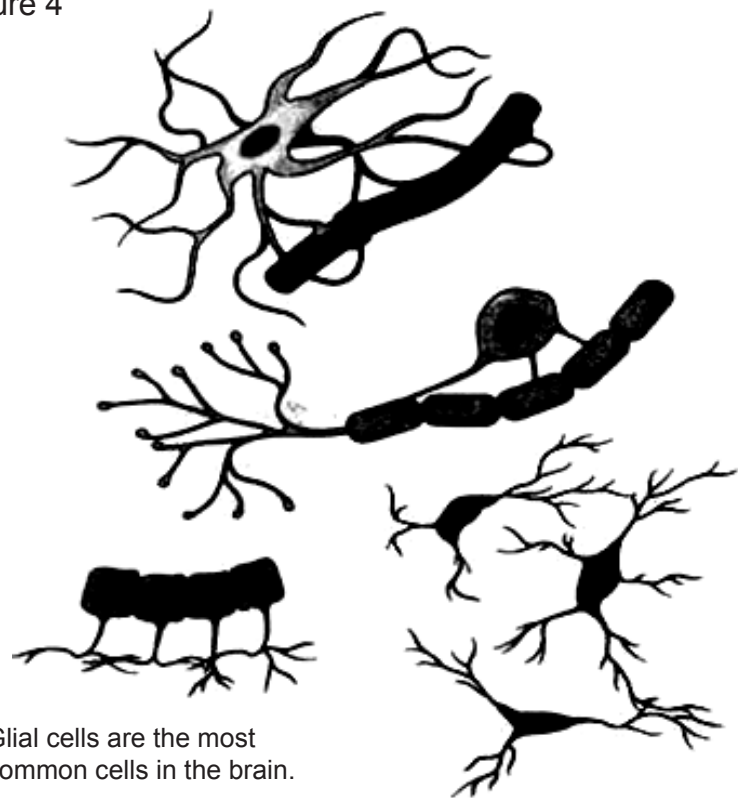
5-Amygdala: Linked to the hippocampus, it plays a role in processing an emotion charged memory. It includes a large number of calming receptors related to feelings of anger, fear and sexual desire. Some modern studies show that it stores emotional memories that invoke spontaneous responses not related to the memory's awareness.

6-Hippocampus: The hippocampus is heavily involved in learning and memory formation. Studies show that when events are held in the long-term memory, it does not need the hippocampus for retrieval.

7-Cerebral Cortex: It is the outside crust of the brain. It is wrinkled, made up of six layers and covered by neurons. The cerebral cortex is made up of four regions, each with a specific function:

a. Occipital Lobe: One of the four main parts of the upper brain, it deals with visual processes. Two people can see the same thing and think it is two different things. The visual perception area allows for perceiving the sensory stimulator, that is, the viewed thing. Then the visual cortex decides which previously visual information corresponds to it. A visual thing does not acquire a meaning unless it corresponds to information previously organized and stored in the brain. A teacher is asked to involve students in the goals of the educational activity because this process allows the brain to expect ideas, forms or information. Thus, the brain focuses on basic pieces of information that it needs to facilitate

Figure 4



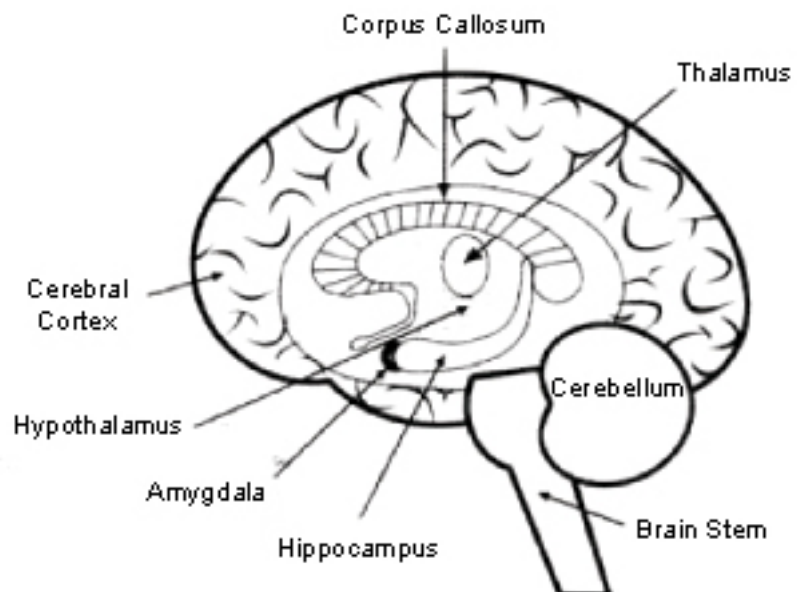
learning.

b. Temporal Lobe: It is believed that this lobe is responsible for hearing, senses, listening, language, learning and some forms of memory. It includes Wernick's area, which is responsible for speech.

c. Parietal Lobe: It is located at the top

of the upper brain. Damage here affects the feeling of pain, touch and sense of location. If you are wearing a tight pair of shoes, you will focus on the pain in your feet. If you take it off, the cells responsible for this feeling will stop sending you strong signals about the matter, letting you focus on another matter.

Figure 3



d. Frontal Lobe: It is voluntarily responsible for regulating movement, verbal expression, problem solving, strong will, and planning. It is the largest part of the brain and carries out complex functions. Also, it is the part evolved most and characterizes human beings. It is responsible for perceptual awareness of all functions. It makes a human being aware and allows him/her to think, feel and act. It is responsible for regulating emotions and may explain why some students get angry quickly.

Many parts of the brain work together whenever a human being does something. The operations of all these parts are related in a complex way. Also, all mentioned parts are in pairs. Looking at the brain from above, it looks split into two almost identical parts: a left and a right hemisphere. The two parts are linked by nervous fiber bundles, the largest being the corpus callosum, and exchange information freely.

Generally, the left hemisphere handles matters that come in pieces and chains. Professional musicians, for example, handle music in the left hemisphere, while beginners handle it in the right hemisphere. The same applies to language tasks. But when it comes to mathematics, chess and problem solving, the right hemisphere is more active. Some research indicates that the left hemisphere explains positive emotions, while the right hemisphere explains negative emotions.

Studying each hemisphere independently of the other is not supported anymore by research, which indicates that the two parts complement each other. For example, during a discussion, the left hemisphere allows us to speak, but the right hemisphere controls the tone that we want to use to deliver a certain message. The same word "great" can imply true appreciation or deep cynicism, depending on the context. Its expression and proper understanding require that the brain work in a complementary way.

## The Educational Implication

How important to educators is the knowledge of brain processes? Does it help to know that the left hemisphere gives us

the text and the right hemisphere helps us understand the context and the meaning?

It may be important to stress the need to "teach the brain" as a whole because the two hemispheres work together all the time. The content (left hemisphere) is important, but the context is important to give meaning to the content and protect it from being forgotten (right hemisphere).

Let us ask ourselves as teachers the following question: How many times did we give students good grades for what they learned, although they did not use it in its proper context within life experiences? Did a 90/100 in history when we were students help us in understanding and analyzing what is happening in the world today? Did a good grade in mathematics help us in solving daily life problems? A teacher says we produce students with fragile knowledge because they either forget what they learned after the exam or do not know when and how to use it.

## How Do We Learn?

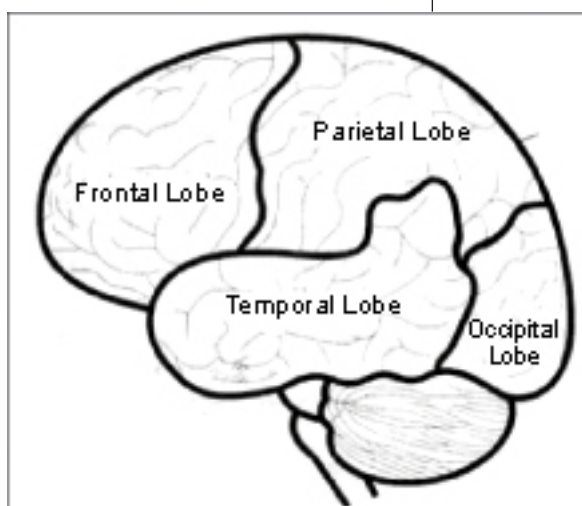
Learning is the best task of the brain. It changes the brain, which can reorganize itself with every new stimulation, experience and behavior. Scientists are

still not sure exactly how this happens. However, they have some idea. Some stimulus starts the process in the brain. It can be internal (ideating) or a new experience (solving a jigsaw puzzle). The stimulant is then sorted out or specified and processed on several levels. Finally, a memory is formed and is able to retrieve the stimulant. This means that pieces of information are placed where they should be to activate the memory easily. It is worth it that we, as educators, understand the basics of these steps. This may give us beneficial insights into how students learn.

As far as our brains are concerned, either we do something we already know how to do, or we do something new. If we are doing something we are familiar with, neural paths have a chance to be more active.

Learning and remembering are two sides of the same coin, according to neurologists. One cannot be studied independently of the other. But in any event, if you learn something, you prove it by remembering. But unfortunately, understanding remembering is a major challenge to scientists. It is a mirror house to them, and they are still looking for answers.

Figure 4



## References

- 1- Eric Jensen, Teaching with the Brain in Mind, Dahran Private Schools, Dahran, Saudi Arabia Association of Supervision and Curriculum Development, Alexandria, VA, United States.
- 2- Patricia Wolfe, Brain Matters: Translating Research into Classroom Practice, Association of Supervision and Curriculum Development, Alexandria, VA, United States.



## Brain-Based Learning and Early Childhood

# The Brain “Learns” More at the Beginning of Life!

**Brain-based learning relies on how the brain learns, that is, the biology of learning. Its aim is to use brain research in the production of curricula and educational strategies. A child’s brain starts to grow at the age of 10 to 12 weeks, getting rid of unused connections between neurons and enhancing used ones.**

**Although the growth of dendrites continue throughout life, complexity in dendrites and connections increases in size and extent until the age of two years, stays the same until the age of 10 years, and decreases afterwards.**

**Shaza Ismail**

Head of the Inclusion Program at al-Mabarrat Association

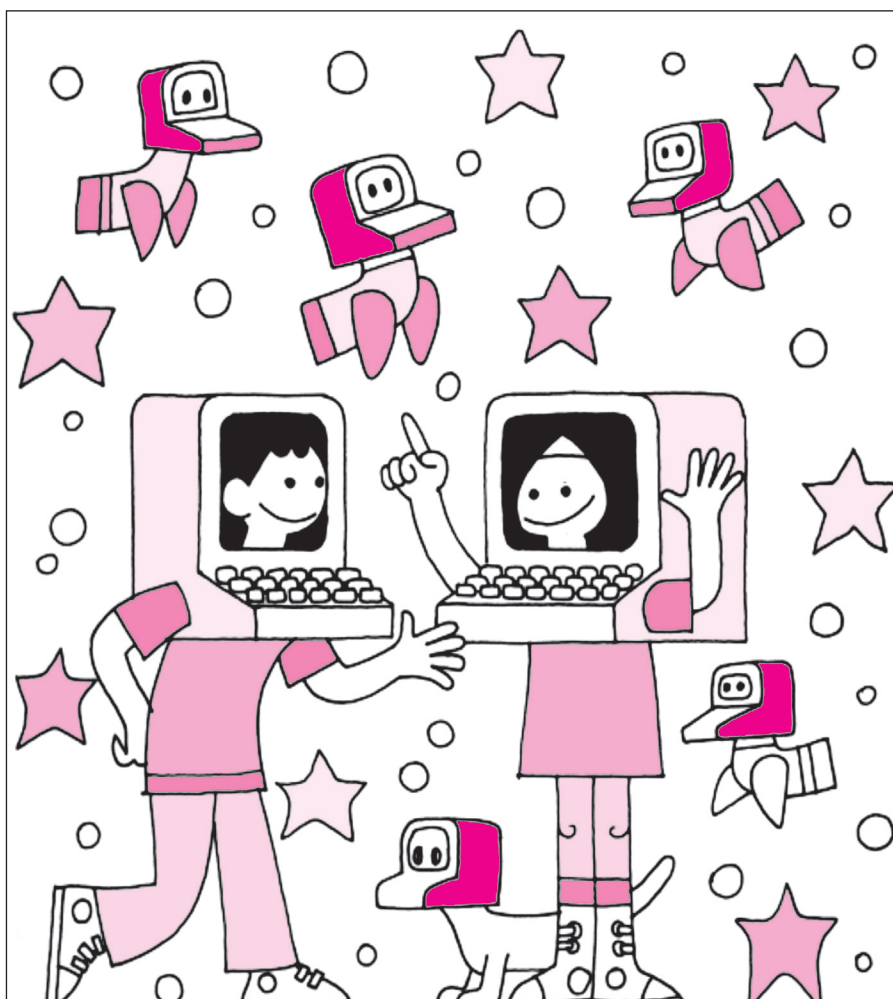
These facts show that applying brain-based learning is more important at the age of three or four years than at the age of nine or 10 years. The human brain searches for patterns with common characteristics through discovery, specification and understanding.

### Different Activities

Early childhood methodology is integral; it deals with dealing in a comprehensive manner with the “whole child.” It handles physical, social, epistemological and emotional development. A good program is based on research and theoretical knowledge to understand how children learn, what to do to have a good educational environment, and what curriculum items are suitable for little children. According to the integrity of the program and its connection to the body brain partnership, we will discuss how basic skills, such as reading, writing, the arts, mathematics and others, can be taught in a specific unit or theme.

### The Seasons Unit – Fall

Circle Time: The teacher shows different pictures showing different aspects of fall. She starts a brainstorming session to let children ideate about what they see in pictures and nature to maintain a certain pattern about fall’s characteristics. The following activities are held:



“We have the right to develop our intellectual abilities”. Bahjat Othman, Lana Haq, UNICEF/SCS/ARC

1- The teacher brings in things related to fall (different leaves, apples, branches without leaves, a picture of a squirrel, etc). She asks children about the colors of leaves and leads a discussion to help them identify these colors (discover that the leaves are not green). She asks for a classification of pictures about fall and another season and for telling common and different aspects (the color of leaves in fall and spring for example).

2- Discovery activity: The teacher shows leaves of different sizes, made of paper, together with two jars, one with a big leaf stuck on it and the other with a small one. She asks children to classify leaves in the two jars according to size.

3- Discovery activity: The teacher brings in apples and other fruits (lemons and pumpkins). She encourages children to talk about similarities and differences in terms of color, shape, size and feeling.

4- Discovery activity: The teacher brings in various apples for children to roll inside and outside the classroom. Children can roll apples on a bent tool or inside a tunnel. They notice differences in rolling speeds between various apples.

5- Visual discrimination activity: The teacher brings in a box and pierces into it various geometrical shapes. She prepares pieces of papers with corresponding shapes. She asks children to drop the pieces into the right places.

6- The teacher chooses words related to fall to enhance vocabulary and “vocal awareness of words.” Children look for corresponding pictures. The words are glued to paper, and the teacher highlights the letter of the week in them. She writes the words under each picture, and then the words are collected to create a

dictionary. Children in Kindergarten II copy or write the words.

7-The teacher brings a high chair and makes moves with the children above and below it, imitating squirrels running on and under trees.

8-Quick like a squirrel: The teacher uses this activity to enhance movement and encourage children to learn how to wear and take off clothes, independently and quickly, like squirrels.

## The arts Center

1-Nature collage: Children paste fall items on pieces of paper.

2-Children make fall leaves from pieces of paper and paint.

3-Children make apples from pieces of paper. They make a collage from the paper apples.

## Dramatic Play

1-Children are involved in play, imagining they are neighbors. Each child shakes the leaves. The teacher approaches a child and asks about his/her name. She listens while the whole name is given. This activity helps children know each other and improve their language.

2-Children play “corner shop” where fruits and vegetables are on display and a shopping cart is standing, together with clothes. The teacher asks them to buy their favorite fruits. Then she asks, “What is the red fruit in your cart? Is there orange fruit? Can you find a green apple?”

3-Uses of things: Children use different things in the corner. They play with apples and plastic knives. The teacher

asks what the knives are for and children show how apples are cut.

4-The teacher provides puppets of a squirrel and people. Children act fall activities.

## Daily Things Come to Life

This activity, carried out during circle time, lets children look at an item and think of a different name for it. This activity encourages children to think about the world in an imaginary way, use items during dramatic play, and use language.

1-The teacher gives children an item and explains that they should hold it once it is given to them. They tell other children its new name and use.

2-The teacher gives children a minute to think what they will do and tell.

3-Each child carries an item (the cardboard tube in toilet paper, for example), says its new name (telescope), acts how it should be used (put it on his/her eyes and looks through it), and passes toilet paper to the child next to him/her so that each child gets a turn.

4-The activity can be expanded. Children stand in different places inside or outside the classroom and look through the “telescope” to distinguish between near and far objects.

## Science Activity

This activity helps children learn, through discovery and movement, how snowflakes are formed in nature. The items needed are white paper, scissors and glue.

The teacher explains that a snowflake is

## How Brain Research Affects the Educational Process

The following findings of brain research are especially important in the educational process:

1- Children learn better, when information is on circular cards, which are more familiar to them and allow them to focus better, compared to square and rectangular shapes.

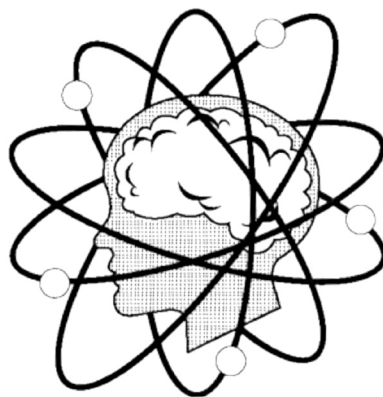
2- Focus on movement in small children. Movement involves all brain levels, merging the right and left hemispheres, increasing heartbeat and blood circulation in children, giving them a sense of location, and releasing chemicals that keep them vigilant and attentive.

3- Teaching mathematics, music and language in a single unit helps children decide patterns and rely on earlier knowledge. Learning this way is better than when these courses are taught separately.

4- The brain gets rid of sensory information that it deems unnecessary or irrelevant. Thus, teaching abstract ideas through linking concepts to personal practices of children helps connect new information with already existing patterns.

5- The brain is not ready for long periods of attention. Changing activities is necessary to let children refocus on new concepts.

formed when water vapor hits very small dust particles. Water vapor is turned into small snow particles, which grow in size when they hit other vapor particles. When it becomes heavy, it falls to the ground as a snowflake. The teacher asks children to play "snowflake." She distributes them into two groups: water vapor and dust. Children move slowly. When they hit each other, they hold hands. They keep doing so until all children have formed a "snowflake." Children then cut a circle of white paper (water vapor) and glue to it small pieces of paper (dust). The teacher collects snowflakes to create a large snowball.



there is no letter B but patterns we call B by definition.

#### Reading Stories

Stories are used effectively to offer a concept or a skill, and to reteach if necessary.

1-Reading stories should be connected to the concept of mobility and immobility. After reading a story on immobility, the teacher produces a bag of feathers, stones, wool balls, wooden cubes and others. She challenges children to tell which objects will move when blown. When they lie down on the rug during circle time, children start their discoveries.

The same approach can be used when teaching about magnets and their attractiveness.

2- After she finishes reading many stories, the teacher plays the game "Who Am I?" She chooses a character from a book she reads and asks children to name principles, guidelines, daily life and social skills, and behaviors that are common between them and the character. The activity can be expanded by inviting children to compare between the skills of different characters in the story and to find common good skills that they themselves share with these characters.

3- The motion trip: Children train using their bodies and facial gestures to imitate actions in a story, a poem or a song. The teacher reads the story, the poem

or the song, while children just listen. When using a picture book, the teacher indicates face gestures and actions in the pictures. Children then act while the teacher reads; she focuses on gestures and movements.

4- Focusing on the concept of numbers when reading stories: When a number of characters do a certain thing, the teacher asks children to act the corresponding number.

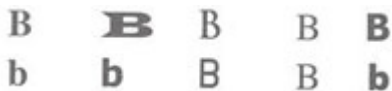
## Math Activities in circle time

1-Teaching addition through puppets. The teacher uses puppets and asks children to pick from a bag a card bearing an addition equation resulting in 4 (2+2, 3+1, etc). Children use puppets to compare various equations.

2-Moving on the ground: The teacher places the "numbers line" on the ground. Children move on the line and notice the numbers they walk across. The teacher tells them that six steps are more than four steps. The children can use puppets on the line. The concept is explained using puppets.

## Activities to Learn Letters

The teacher displays letters in different manners to make them richer and more diversified and to help children understand all forms of the letter in question. For example, when they are taught the letter B, they will not find it hard to see any of the following as variations:



There are variations of each letter, handwritten, drawn or printed, showing that

## References

- 1-Hyson, M (2003), Putting Early Academics in Their Place, Educational Leadership, 60 (7), 20-23.
- 2-Zull, J (2004), The Art of Changing the Brain, Educational Leadership, 62 (1), 68-72.
- 3-Derks, F., Hardin, B., Loher, L., and Wesley, P. (1998), Infant-Toddler Planning Guide, North Carolina, Kaplan Press.
- 4-Brain Development Activities for Infants and Toddlers, technical assistance paper, Division of Public Schools and Community Services, Florida Department of Education, June 2000.
- 5-Ramey, C., and Ramey, S. (2002), Early Childhood from Efficacy Research to Improved Practice, A Summit on Early Childhood Cognitive Development; Ready to Read, Ready to Learn: A call to Leadership, Little Rock, Arkansas.
- 6-Shafehi, Hamad Hussein, Fam Mansour, Rushd (2004), An Introduction to Early Childhood Education, Dar al-Kitab al-Jamehi, UAE.

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# What Parents Should Know about the Brain

**Scientists learned about the brain in the last 20 years much more than what they had learned since the dawn of human history. They are working now on brain maps, similar to genetic maps. The brain plays the largest role in controlling human behaviors and daily activities such as planning and organizing everything in work, communicating with others with words, remembering and forgetting events, perceiving things and faces, learning reading and writing, and all emotions...etc.**

Dr. Elham Shaarani Qodeih

Psychology professor at the Lebanese University, and psychotherapist

Before talking about the brain and its importance for the body as an organizer and leader of all body activities, I have to shed some light on the nervous system in which the brain the most important part. The nervous system is the center of all feelings, movements and activities in the human body. It organizes all vital functions of the body, such as blood circulation, breathing, heartbeat and digestion. The brain is the center of command and decision making in order to regulate and coordinate all our behaviors; and the brain does it with utmost precision. The nervous system is tightly connected to the brain. An embryo comes into being with an incomplete nervous system, which grows and develops gradually through maturation and growth.

The brain contains 90 percent of the body's nerve cells and receives the energy it needs to learn from the blood, which brings in nutrients, such as sugar, proteins and oxygen. Oxygen is very important for the brain, which consumes 1/5 of the amount that the body intakes from this gas. If blood flow to the brain is blocked for a few seconds, the human being loses consciousness.

The brain is the main control center of the nervous system. Without going much into details of the nervous system and the role of each part of it, I would like to stress the fact that the brain plays an important role in thinking, remembering and learning, as well as behavior and emotions. I would also like to stress the importance in this regard of proper nutrition, positive stimulation and dialogue with children, as well as developing their



**Parents play a basic and active role in educating children. They sow the seeds of knowledge and work on psychological and social openness and balance**

perceptions and feelings through proper communication. Contemporary psychologists focus on Piaget's finding that development is the result of the interaction of hereditary and environmental factors, both social and natural. Educating a child today has become an integral process, which deals with all areas of knowledge and information; the child is a whole being and must be taken care of on all levels. Thus, the child must be prepared for an active, productive life, and this life cannot be attained except by working on the child's personality, taking into consideration the integrity of its components, their good interaction and the dynamism of their functions.

## The Family Atmosphere

Education starts at early years, during the two stages of childhood – early childhood (from birth to six years) and middle childhood (from six to nine years). This helps the child coordinate between various forms of family life. During early and middle childhood, growth is quick, especially between two and six years, leaving a major impact on life in general. At this stage, children start gaining the compromise methods of their families, as well as expertise, skills and traditions. They start forming emotional habits towards others. Thus at this stage, they need a rich environment they

did not need before, that is, after birth. At the early childhood stage, the child needs an organized and healthy relational family atmosphere. That is why parenthood is described as aptitude and responsibility, and a healthy child is said to be a happy product of a happy family. Here I stress the primary relations, throughout the critical stage from before birth to six years. These relations exist between the child and the mother; a system of special emotional interactive relations comes into being. Interactions and relations start, and consequently enhance, activate and develop the natal neurological maps of the brain. The child has a complex brain in terms of inclinations and abilities, affecting his/her inter-gral communication and interaction with the mother. The mother harmonizes with the voices of her child, and the child responds to her. Each plays the role of a mirror for the other, a mirror that attracts and stimulates. Thus a special and unique relation is neurologically established.

### Deprivation, Interaction and Play

The child is equipped since birth with the brain neurological mechanism to interact with the mother. The mechanism is active as much as the mother responds and depending on how rich the interaction gets starting with birth. Emotional deprivation at this early age is complete when the child loses one or both parents, such as when the child is raised in an orphanage with unknown parents. On the other hand, deprivation is partial when one or both parents cease to exist in the child's life a few years after birth. Each type of deprivation has its own impacts on the child's development and psychological and mental health. Any emotional deprivation in early age hinders the natal neurological mechanism necessary for interaction between the child and the environment, due to lack of response and stimulation by adults, especially the parents. It also hinders the child's development at the emotional and social levels, and causes obvious lagging in the child's linguistic development and consequently in academic achievement. Adults may be unaware of the child's very rich and very complex world in terms of interactions, responses and stimulations. Most parents think that the child "doesn't understand or perceive," and that it is enough to meet

the child's basic biological needs (food, drink, cleanliness, etc). Thus, early childhood is important in developing and stimulating the child's mental abilities by providing enough support and care by the parents, who should give the child a chance to practice the senses he/she enjoys. The child, for example, enjoys touching, tasting, looking at and discovering things. He/she gets an idea about distance, shape and size by experiencing things in around him/her. This sensory ability is at the center of intelligence development in the child because it creates concepts in the thinking process. Various toys help the child discriminate between colors, hues, sizes (playing with cubes), lengths and shapes (circles, squares, triangles, etc). The brain carries out these mental processes gradually depending on age and maturity. Here comes the importance of playing, a priority for children, in early formative years.

### Mental Health and Nutrition

It is impossible for the body to be healthy without proper nutrition. Also, an old saying goes as follows: "healthy body, healthy mind." That is why parents worry when their children lose appetite; good appetite is considered a sign of good health. Children vary in the amount of food they need. Nutritional

#### Parents' Questions

"...That's why we say that the role of parents in educating and rearing the child is effective and basic in sowing the seeds of knowledge, openness and emotional and social balance. Parents often ask about their children's mental, perceptive and emotional abilities, and how knowledge is built and developed in their growing brains...For example, how does a child know and perceive things? How can he/she learn new things? Why do they forget and how do they remember? Are they intelligent enough to succeed and progress? Are they excellent or geniuses? Are they lagging? Is their nutrition enough for the proper growth of their body and brain? Why does a child lack attention? All or some of these questions come to the minds of parents about the conditions of their children and their sensory or intellectual abilities. All such questions are related to the brain and nervous systems of children."

balance is necessary for proper growth, that is, all necessary nutrients should be available in a meal, especially lunch. A good lunch should include vegetables; cereals; some meat, chicken or fish; and the season's fruits. The mental and physical health of a child cannot be guaranteed if parents are angered by his/her verbal or active rejection of food or if they show too much care and concern. Such reactions by parents make children feel important and strong; children would keep attracting attention by rejecting food again.

Mental health cannot be without physical health, and physical health depends on the quantity and quality of food. Some specialists attribute children's learning disabilities to a lack of proteins in their food – proteins come from red meat, eggs, etc. Some children showed more activeness in learning when proteins were added to their food. But too much protein disturbs catabolism and anabolism. In other words, healthy diets help in the learning process.

### The Brain and Emotions

Love, fear, sadness, anger, happiness... We know very well that stimulants of emotions are perceptible by the brain. The brain causes sensory physiological changes that are felt throughout the body, and once the senses perceive these changes, emotions come into being. Thus, emotions result from our perception by our brains such physiological changes. We feel sad because we cry, get angry because we shout, and get afraid because we are shaking. According to this theory, we say if someone wants to feel happy, he/she should smile; smiling or laughing is enough to make us feel happy (a modern therapeutic approach is based on laughing).

All aspects of our emotional life are related to our brains' activity. The human brain is programmed to get into an emotional phase once it gets a direct or symbolic signal. Parents can change their children's emotions, or train these emotions, by affecting the causing idea. They can show the child that the idea is not true or does not affect their affairs or interests. Thus, the brain is the source of all emotions. By correcting a wrong idea, we can decrease the emotion, be it love, fear, anger or sadness.

### The Brain and Talent

A talent is a natal thing because it is the result of the composition of the brain and the body as a whole. The brain is the source of thinking and action. The

natal aspect of a talent is decided by hereditary factors. But talents have an acquired aspect, too; this aspect is decided by the way children handle the inherited part. Parents help here providing habilitation, preparation, training, guidance and change, but children can either excel or go back to the median. Goss, a famous statistician, imagined a graph where regular people gather in the middle, excellent people to the right and lagging people to the left. However, an excellent person can lag, while a lagging person can excel. Those in the middle can move either left or right. But any such changes come into being through learning and training, both of which are directly related to the brain.

## The Brain and Dialogue

It is important to know the child's needs and desires by knowing how he/she thinks. It is also important to know what suits him/her and avoid hasty or emotional conclusions. Who would have the answers more than parents and, when needed, specialists? How would such knowledge be achieved? The answer is through communication and dialogue with the child, through sympathy with the child without making hasty conclusions, and through positive listening and explanation. The basic condition here is that confidence should be available between the child and parents, who should listen to the child, not only with ears but also with eyes and hearts. The parents should focus their attention on children's words, ideas and emotions and should discuss words, ideas and emotions with the children. The parents can ask for explanations of certain words of their children to form a mental idea about what they are saying, while paying attention to the hints that children make when they express their ideas and respecting the discussion and the dialogue by avoiding interruptions until they finish expressing what is on their heads. In other words, parents should listen to children and hold dialogues with them to understand how they perceive things. Good communication of ideas is very important in deciding the help that the children need. Talking helps restore self-confidence, eases tension and paves the way for dealing with difficulties.

## The Brain and Feedback

Feedback here means correcting a mistaken response and redirecting it if it missed the point. If, for example, a

mother asks her son (a first elementary student) to copy a certain word (or letter) on his copybook, he reviews his response. If he thinks he was mistaken in copying some letters, he will erase the word and try to rewrite it. Here, the child receives visual sensual self-feedback that warns him about the mistake; what he writes is not visually congruent with what he is trying to copy. He understands the mistake and tries to correct it. This shows that the child, through visual sensual self-feedback, can guide himself/herself. But there is another type of warning: external feedback. Here, others guide the child. An example is learning language, whereby the child stores linguistic information by trial and error in pronunciation through the interference of parents and the environment. The child's vocabulary and pronunciations are corrected this way until he/she is able to discover the wrong sentence, try to correct themselves and enjoy self-guidance.

The human brain is perfectly designed to work with both internal and external feedbacks. Our whole brain is self-referenced. It decides what to do according to what has just been done, and without our feedback system, we will be unable to learn. Our brains send special neurotransmitters related to joy, for example, such as endorphin and dopamine, which are stored in the brain's so-called center of joy. This center is also called the center of reward or compensation; that is where our brain compares new perceptions with visual or acquired memory. The more the brain has happy memories, the more likely is the person to enjoy new stimulants as happy emotions, and vice versa. When children work in a group, they have a good chance to have social and practical feedbacks.

Even when children talk to each other, they get specific feedbacks about their ideas and behaviors. The most effective feedbacks are specific, rather than general. For example, videogames and computers give amendable and producible feedbacks: children can choose (according to their age) to reproduce the feedbacks one more time. If feedbacks are hard to reach or if the performance cannot be changed when the feedback is received, the brain will not learn. Sources of feedback are many, including the performance of others, especially parents and teachers; games; reading; thinking and problem solving; all sorts of the arts; etc. Examples are a mother

who wakes up when she hears her child crying but not when there is noise in the street, and a child who receives a new toy tries to use experiences with earlier toys. Learning is the result of what learners do and what others do to them. Learning takes place in a special family/social environment, including fathers, mothers, siblings, relatives, friends and teachers.

## The Brain and Positive Reinforcement

The individual's behavior depends on his/her expectations from such a behavior. The child may await good outcomes from his/her behavior (a reward), not negative results (a punishment). When a child gets a grade he/she thinks is good, he/she awaits a reward from their parents. But that may not be the case all the time as parents' expectations may differ from those of their children who are proud of their achievements and the grades they got. The child here feels frustrated and confused; they may feel later unable to follow their learning efforts and activities. The reason is the fact that parents want their children to get the best of grades.

Encouragement plays an important role in our lives, and this is especially true in children. If we get good results from something we did, we tend to repeat it in similar settings. Good results are positive encouragements or stimuli that increase the chance of recurrence. If we fail, bad results are negative encouragements that decrease the chance of recurrence. If we are punished, we are likely to do something even less desirable, and we end up in a vicious circle.

In the last example, the parents did not provide the positive reinforcement as expected in order to let their child have self-excitement or self-encouragement to work more to get better results. The child got negative stimulus for the parents, and he/she may not be able to give better results. The chance to perform worse is bigger because the child lost the motive or the stimulus. The strength of the reinforcement decides the behavior. We cannot learn if we do not have a motive to do it. Practically, motives are created by creating new needs (a situation of dearth) that is fulfilled by encouragement (food in animals). But since humans have mental abilities and symbolic representations, encouragements are various: good grades in school, money,

meals, etc. Positive encouragement is the threshold of positive thinking about oneself and others. It is not restricted to talk because good examples and role models that children imitate are in the beginning parents and siblings.

Thus, not all encouragements are positive. There are negative encouragements that are used, either to weaken learned response or its frequency or to learn a new substitute response. This is where punishment comes. If we follow a certain response (a behavior or an action) with a repulsive stimulus, the response weakens or vanishes (it is oppressed in similar occasions later on). An example is a child who has just learned to use colored pencils and draws on the wall (unwanted response or behavior). If he/she is deprived of pencils for a certain time, while given an explanation that this is a punishment, he/she will not do it again. This is similar to a rat in a labyrinth inside a laboratory; if it takes the wrong way and gets an electric shock, it will learn to avoid making mistakes.

Thus, encouragement by punishment and encouragement by reward are different: punishment oppresses an unwanted response, but may bring serious damage because its results are unexpected and it does not provide a substitute behavior. A living organism may substitute an unwanted response with a less wanted one. The reward means, "Do it again" because it stimulates the brain to do it (our memory is a good recorder); a punishment means, "Stop it." A punishment may bring about hatred of the punisher (parent, teacher, trainer, etc) or his/her institution (home, school, club, etc). Punishment may also bring about an aggressive behavior that is more dangerous than the original, punished behavior.

Repeated physical or moral punishment is not advisable because it may lead to serious consequences in terms of the child's personality in general and his/her thinking, which results from his/her communication with others, in particular. Oppression and violence in the child's home or school environments decreases his/her brain's attentiveness, and this ability is affected by the type of stimulus and reminding.

The nervous system plays a role in attentiveness and learning; attentiveness happens in all parts of the brain, whose chemistry is the real life of the attention system and is much responsible for the things that children pay attention to in their learning. This chemistry includes



Education starts at early years to help children coordinate between different styles of family

substances such as neurotransmitters and hormones, including ace-tylcholine, which is related to sleepiness and is higher at night when we are about to sleep. We are more attentive when more adrenalin exists in our bodies; but when adrenalin's level is too high, we become nervous and angry. Scientists believe the norepinephrine is the substance that is most responsible for attention.

If we want our children to be more creative and attentive, we have to encourage them to walk, have fun, tell stories, listen to music and practice various arts because these things help a lot in this regard.

Attentiveness fluctuates during the day. Some children feel sleepy at home or in class because their attentiveness is low. Thus, children must be encouraged to walk and stretch their limbs or stand up if they feel sleepy to regain their concentration. During such fluctuations, the brain's learning abilities change; also, blood circulation and breathing change, too, affecting learning abilities. A working child must rest, whether at home or in school (a tired brain should rest for 15 minutes) several times a day to enhance his/her productivity.

The human brain is very active and adaptable. Thus, a child's wrong answers, especially in the learning context, are normal due to his/her limited knowledge and experience. A child is not expected to give right and experienced answers all the time; this is not healthy for the development of an adaptable and intelligent brain. Learning today should encourage children to

explore alternative thinking, various answers and creative insights; a single right answer should not be given a priori.

This is the intelligence that people talk about. It is the ultimate result of people's learning. Learning is the best thing a human brain can do. Learning changes the brain, which can reorder itself with each new stimulus, experience, excitement or behavior (assembling a jigsaw puzzle). The stimulus is specified and processed on different levels. The memory can retrieve the stimulus, implying that, pieces of information are in their right places to facilitate the activation of the memory. If we, teachers, are aware of these steps, we will have more and better insights into how children learn and how their brains work.

## References

- Psychological Health, Dr. Mustafa Hijazi, Arab Cultural Center (2000).
- Psychology Rights, Dr. Maryam Sleem and Dr. Ali Zaiour, Dar al-Nahda al-Arabiya (2004).
- The Human Brain, Alam al-Maarifa, Issue 287 (November 2002).
- The Family Dynamism in the Era of Globalization, Dr. Abbas Makki, Dar Majd (2007).

## Pictures

- Raising Children in Yemen, field study on behaviors and skills, Higher Center for Motherhood and Childhood/Child Development Project, Yemen, UNICEF, Soul

## Maltreatment, Negligence and the Development of the Child's Brain

The first stage of pregnancy is considered the most sensitive in an embryo's life. During this stage, the main development of its body, especially the brain, takes place. The fastest growth of the brain takes place in the first stage of life. The child's living experiences have a permanent effect on his/her abilities to learn later on. A newborn starts his/her life with a special group of primitive abilities. Born with him/her, these abilities interact with the stimulation resulting from his/her relation with the outside world.

Zeina Hobeish  
Clinical Psychologist

Growth and development are a result of an individual's interaction with the surrounding environment. Any unsuitable environmental condition may affect the child's growth and development. Psychological pressure is a key environmental factor that can affect the child's development if unsuitable to his/her needs; it is a source of slow and delayed physical, emotional and intellectual development.

Studies show that maltreatment and negligence can hurt the embryo's brain. Violence against children after birth can lead to long-term health problems and may in some instances – cause brain injuries and even death. Families often resort to emotional violence, including insults and threats, as well as physical violence. A child who is exposed to violence feels deprivation, fear and strong negligence. Maltreatment and negligence can cause disruptions in neurotransmitters and disturbances in the body's physiological-neurological factors because of strong psychological pressure and traumas.

### The Brain's Formation and Its Functions' Development

A human brain develops according to a logical chain, related to the brain's functions. The brain starts developing three weeks after inception, whereby thousands of new cells develop every minute. The brain's development proceeds until the organ's weight reaches 370 grams at birth.

Scientists have proven that different brain regions develop in different ways.

Generally, the brain develops down-side-up. The bottom part of the brain, the brainstem, regulates necessary life functions, such as blood circulation and breathing. It also controls basic involuntary reflexes.

The brain's second and larger part develops during the first year of life and coordinates complex actions without guidance from consciousness. This part includes the cortex, which is made up of several layers covering most of the cerebrum. Together, the cortex and the cerebrum regulate involuntary movements and perception operations, such as the memory, logical thinking and concentration.

A newborn's physical functions are governed by the brain's lower parts. When the cortex, between ages 2 and 16, starts prevailing, the child's behavior becomes more voluntary and complex.

The brain is made up of two equal parts, each having special functions that control one side of the body. Neurons from each part communicate in a complex network to develop general perception, the five senses and other neurons.

During his/her first year, the weight of an infant's brain doubles thanks to brain cell reproduction, and contact points between cells and between brain parts develop, too. Contact points are the basis of thinking and learning. Between ages two and six, children develop a various set of skills (motor coordination, sensual perception, speech, memory, logical thinking and imagination). Researchers believe that the brain's maturity contributes to the development of such skills.

The brain develops fastest during the first stage of life. The child's experiences have a permanent effect on his/her learning ability in the future. A newborn has a specific set of primitive abilities (neurological reflexes: these are motor, not perceptive responses), which are born with him/her and spontaneously interact with stimuli that he/she faces in his/her relation with the outside world. When the child develops intellectually and physically, he/she starts gaining skills, thus losing with each acquired skill a primitive reflex.

In an organized operation, a complex tissue of cells called the brain develops. The development of these neurological cells is strongly related to the child's emotional, social and intellectual composition. The child's experiments and experiences in the surrounding environment contribute to the formation of neurological contacts inside the brain.

The environment where the child grows and the child's interaction with hereditary factors and individual characteristics contribute to healthy brain development and emotional stability in the child; they can also hinder these two processes.

Unused neurons can deteriorate, thus the importance of the child's experiences during the brain's development. The environment can influence the connection of brain cells: if the brain does not receive the right stimulus at the right time, it may be difficult, sometimes impossible for the brain to reconnect the cells on its own at a later stage.



## How to Protect the Embryo from Harm

Pregnant women:

- Need healthcare during pregnancy.
- Need good nutrition
- Should avoid smoking, drinking alcohol and taking drugs.
- Need support, acceptance and help to accept hormonal changes.

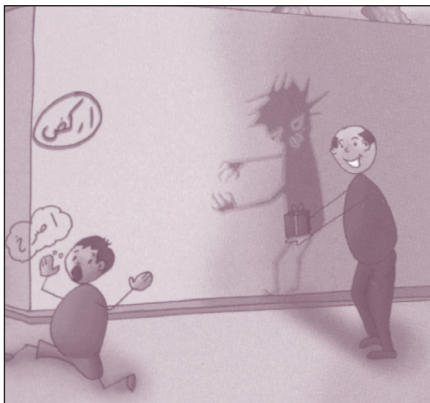
## Factors Contributing to Healthy Brain Development

- \* Providing the brain with oxygen: The brain needs oxygen to get nutrients and energy, and it gets it through sports.
- \* Drinking a lot of water and avoiding harmful gaseous drinks and stimulants.
- \* Giving the brain times to relax and "sleep".
- \* Having balanced, healthy food.
- \* Providing acclaim, understanding and sympathy.

The brain's healthy development has a direct influence on the child's perceptive abilities (the same applies to education, encouragement and care). This enhances the child's self-confidence and his/her interest in exploration. Relations with others in early childhood are a key source for the development of the child's brain. This development may take place in parallel with psychological relapse, crises and pressures.

## Problems

The uterus's environment interacts with the external environment and hereditary factors. Dramatic problems in growth may



The child has the right to protection from maltreatment or negligence, with supervision by parents and support from the authorities

arise before birth. Environmental causes are various and can be classified as such:

### Prenatal Reasons:

- o (alcohol, drugs... etc) can cause physical and mental deformations.
- o Inflammations and disease that may affect the mother.
- o Malnutrition.
- o Poor nutrition before birth and in the first stage of life can affect the brain's growth and lead to nervous and behavioral disorders.



Avoiding smoking protects the embryo and its brain

### Natal Reasons:

- o Poor oxygen in tissues may lead to the loss of brain cells, thus affecting healthy brain development.

### Postnatal Reasons:

- o A brain disorder due to certain diseases, such as meningitis, or to accidents, such as beatings or falling on the head.
- o Malnutrition.
- o A lack of care about the child and not giving him/her support and sympathy.
- o Poisoning.

The child may suffer other relapses, such as malnutrition, negligence, and emotional deprivation, as well as deprivation of stimuli and experiences that lead to low performance, which is especially visible in children in poor environments. Rohrwig, who experimented on mice, noticed that the cortex gets thicker in mice that grow up in a rich, stimulating environment. Neglected mice did not get thicker cortices. Thus,

richer experiences positively affect the brain's growth and enhance the growth of its neurological networks.

When the child feels love, understanding and appraisal, he/she develops his ability to remember and retrieve information. The way children are treated affects their abilities and the way they feel about themselves.

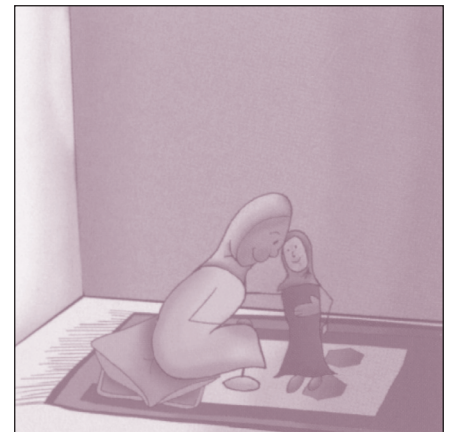


Play and sports provide the brain with oxygen

## The Effects of Maltreatment and Negligence

When children are maltreated and neglected, they feel strong psychological pressures. The body can accommodate psychological pressures resulting from difficult conditions. When a human being feels sad or endangered, the body secretes certain hormones, such as adrenalin and cortisone, to allow for accommodation.

Studies, conducted by scientists on children who suffer longstanding psychological pressures, show that these children have a higher level of the anxiety hormone, cortisol, which is proven to destroy brain cells responsible for memory, causing major damage in the



The child needs warm and ongoing relations

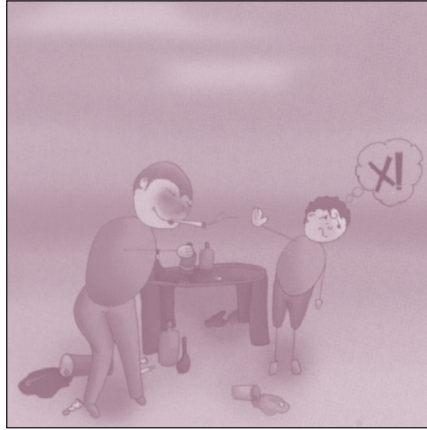
brain area in question.

Chronic psychological pressure decreases the child's immunity system, it may make the individual feel exhausted, have sleeping and concentration disorders, and feel stomachache and other pains. Psychological pressure can cause a feeling of frustration and depression. Statistics show that one in every 10 children suffers vague physical symptoms, including tiredness and nausea, stomach disorders, lack of appetite and general slimness, and digestive system pains and disorders.

Physical disorders can be a symptom of depression or psychological anxiety, resulting from a disorder in the hormones that help the body accommodate with the cause of psychological pressure. Children who are beaten, maltreated and even sexually and emotionally abused for long periods are very likely to feel the above mentioned symptoms.

Vague physical symptoms, emotional problems and behavioral disorders usually hide severe and chronic psychological pressure, resulting mainly from maltreatment and negligence.

The body cannot be separated from environmental conditions (the family and the surroundings); they are interrelated. The brain, governs the body, controlling its different interactions, both internal and external. When children face negligence and witness tension and violence because their parents fight, or when one or both parents are addicted to alcohol and drugs, children are more vulnerable to psychological disorders. If these pressures coincide with the development stages of certain brain areas, they may hinder the neurological extensions that are necessary to positively develop the child's abilities; the development of neurological networks is limited, decreasing



the abilities of brain areas in question.

If an individual suffers disruption or degradation in a brain area, the function it controls will be affected. It is important to know the psychological disorders, physical symptoms and behavioral problems of unknown reasons are "calls for help" by the child. Also, psychological help, memory weaknesses, thinking discontinuance and concentration difficulties have direct effects on the child's academic performance.

The child's brain can get really hurt during early childhood development stages. The child is then unable to protect himself/herself, thus the importance of protection, precaution and awareness at this stage of the child's life.

## Protection Measures

Everyone is concerned with precaution and protection from violence against children. Suitable measures must be taken, like providing proper support and advice during early childhood. This includes:

- The mother should visit the physician or health worker and do necessary tests during pregnancy.

- The child's growth should be followed to make sure that his/her development is proper.

- The child should take vaccinations on time and should be provided healthcare (proper nutrition, cleanliness, etc).

- Parents should be provided support (especially the mother after giving birth) to enhance their educational role and to support them in their provision of a safe life for their children.

- Psychological support should be provided when necessary, and parents should be helped to provide the sympathy and care that are necessary for the child's psychological help.

- The child's abilities should be encouraged and developed through early stimulus to help him/her develop these abilities.

The child needs warm and ongoing relations and physical stimulus for his/her environment in order to grow and develop in a healthy manner.

## References

- DIATKINE R., LBOVICI S., SOULE M., « Nouveau traité de psychiatrie de l'enfant et de l'adolescent », Tome IV, Presses Universitaires, PUF, 1997.
- DUMONT M., PLANCHEREL B., « Stress et adaptation chez l'enfant », Col-lection Presses Universitaires du Québec, 2001.
- N. BOISACQ-SCHEPENS et M. CROMMELINC, Neur psychophysiologie, Tome 2, pp. 911001- Ed. Masson Paris, 1996.
- BANKS M.; ASLIN R. & LESTON, R. "Sensitive Period for the Development of Human Binocular Vision", Science 190: 6751975, 677-.
- CATTEL, R. "The Structure of Intelligence in relation to the Nature-Nurture Controversy," Intelligence, edited by R. Concro (New York: Grune and Strat-ton), 1971.
- EPSTEIN, H. "Phrenoblysis: Special Brain and Mind Growth Periods I. Human Brain and Skull Development", Developmental Psychobiology, 7 (3): 2071974, 216-.
- PIAGET, J., Psychology of Intelligence (Totowa, N.J.: Littlefield, Adams and Co.) 1969.
- SYLWESTER, R. "A Child's Brain", Instructor, 9195-, Sept. 1982.

## They Develop Expression, Observation and Thinking Skills

# The Effect of Music, Play and the arts in the Development of the Child's Brain

Researchers believe that children's abilities are similar to a seed that needs, in order to grow well, nutrition, care and protection, which, if not given properly and at the right time, leads to some of the children's abilities cannot be achieved or developed.

Dr. Hiyam Lutfi Zein

Assistant professor of educational psychology at the Lebanese-American University

When the child is born, his/her brain has 10 billion neurons. During the first three years of life, the brain adds billions of glial cells to provide support and nutrition to neurons, which can make thousands of web-like connections to reach other parts of the brain.

It is important to know that when the child is six, the brain's size is two thirds that of the adult's. Yet, connections between neurons are five to six times as much, compared to both an adult and a one year old (Pearce, 1992). Thus, the brain of a child who is six or seven has a great ability to network brain neurons. This ability ends at the age of ten; then, the 80 percent of these cells start to be lost if all are not used and activated. During this period, if the networking ability is not polished and stimulated, the brain will release enzymes that destroy unused paths.

The more the child uses the brain's cells and brains through movement and sensual experience, the more solid paths for neurons he/she builds. When the child uses the senses of hearing, taste, smell or touch or throws something, neurons are networking among each other. Repeating these movements and experiences is basic for the development of language and a higher level of thinking in the child (Buzzell, 1998).

Many new fields grabbed the attention of scientists and researchers, including the role of music, play and the arts in developing thinking and learning. A large number of researches show that music supports, strengthens and develops brain cells and builds connections between the brain's two hemispheres to allow the individual to use various means, techniques and levels of thinking. Stud-

ies agree that depriving the child from healthy sensual effects and stimuli leads to losing a number of neurological paths. Consequently, the brain's effectiveness is lost, the memory weakens gradually, the level of intelligence decreases, and changes in character take place.

I will discuss the effects of music in the brain's development, then play and finally the arts. Music plays a key role in

healing the body, strengthening thinking and releasing creativity. A lack in stimulating hearing during pregnancy and early childhood leads to lagging in behavior and communication skills (Don Campbell, 1997).

A child who grows while hearing music shows the ability of spatial thinking. The same applies to playing a musical instrument; it has a major effect on thinking



Music and the arts are an international language needed by all children. Bahjat Othman, Lana Haq, UNICEF

skills. This does not mean that if we listen to music we become more intelligent; music helps us move some parts of our brain, which helps us think better. Why does this happen? Researchers believe that music paths in our brains, especially those of classical music, are similar to those that we use in spatial thinking. When we listen to classical music, spatial thinking paths open up and get ready for use. But the effect dies out an hour after we stop listening to music.

## Classical or Rock?

Why classical music (Beethoven, Bach, Mozart, etc) and not Rock, for example? Because classical music has a complex composition. Three-month old children can grasp this complex composition and even know music they heard before. Researchers believe that music's complex composition pushes the brain to solve problems related to spatial thinking. The effect of classical music is different from that of other types of music. But this does not mean that other types of music are bad; they simply influence other brain paths.

To discuss music's importance in the development of the child's brain, we must first answer the following question: Does music make the child more skillful? The answer is yes. When the child learns a song, listens to music or dance to the rhythm, he/she experiences an integral aspect between the body and the brain; this aspect prepares him/her to assimilate courses, including reading, writing and mathematics.

Music enhances logical spatial thinking, which is a neurological process that helps the child understand mathematics. The best way to enhance learning in a child is to introduce music at development's various stages, but it must be presented in different, enjoyable and entertaining manners. Discovering the child's tendencies helps discover his/her choices. This way, we can decide the type of music that will best enhance their learning. Educators noted that children who were exposed to music during their development benefited from it in other aspects of their lives. Listening to music enhances and develops hand dexterity, solidarity, self-appreciation, thinking skills, creative abilities, self-restraint and self-expression.

Unfortunately, schools today neglect music's importance in the academic achievement of students. Schools must

consider reintroducing music to their curricula in an accurate and organized manner. Music must be a basic part of the curriculum, not an extracurricular activity as it is today, and a special budget must be allocated in this regard, similar to other courses. School officials must understand music's importance in intellectual productivity and behavioral development in children and make use of music in this regard before it is too late.

Another question deals with music's importance: Is one type of music good? Of course not. We must let the child listen to any kind of music with good melody, and music should be selected according to the time of the day. For example, when it is bedtime, slow music and songs are good as calming factors, while fast music is good at the time of play and movement. Classical music is good when children wake up; it stimulates thinking, activates the brain and encourages emotions.

## What Are the Best Ways to Make Music Part of the Child's Life?

The answer is easy: instead of watching

television, turn on the stereo and listen to music. If after a child is born, parents sing, play music, and dance and jump to it, making all that part of the daily routine, they help create an interest in music in the child. When the child grows, he/she develops a taste for music.

Another way for making music part of the child's life is through playing music at bedtime; music helps the child relax and not wake up at night. But music should not play briefly; otherwise, the child will wake up a short time later. To help children develop a love of music, they must be encouraged to compose their own music just for fun.

In a nutshell, music is good for everyone in terms of mental, physical, emotional and social wellbeing of people who suffer problems and of others. Listening to music helps develop communication skills, academic performance, attention and motor skills. Music also helps in behavioral treatment and pain control. The brain's physiological performance changes with different music. Music slows down and optimizes breathing, adjusts heartbeat and blood pressure, and decreases muscular contractions. Listening to music increases endorphin, which tunes down pain, and decreases

## The Strength of Music in Education

The influence of music on the brain is a comprehensive field that developed in the last 10 years.

After intensive studies, scientists noticed that music invokes in the brain a very high level of thinking. They concluded that a child who plays a musical instrument develops the ability to understand mathematics and sciences more than any other child.

On the other hand, music influences the brain in different ways because the repetition of its difficult and complex rhythm develops the brain, sharpens vision and hearing, and increases communication, concentration and memory.

Scientists believe that children come to this world ready to receive any feeling or activity. Thus, parents must enrich and increase the experiences that enrich children's brains. They can increase the level of brain operation in their children, develop their ability to learn, and develop their lives, especially through classical music.

In a nutshell, music is an experience.

Since 1836, more than 12,500 musical studies have shown the role the music plays in educating children. Physical, mental and psychological conditions and social development progress in children who learn to play a musical instrument quicker than in others. Evidence can be found in schools whose curricula give high importance to music.

Studies have also shown that music can enhance learning in handicapped children. With music, reading becomes easier in children who suffer from slow understanding and pronunciation problems.

Diana Haddad, Al-Nahar newspaper, 29/7/07

the level of stress and anxiety hormones, thus enhancing the immunity system.

## The Importance of Play

Now we discuss the importance of play in brain development. Is play important for growth and development? The answer is certainly. Play is important for the child's social, emotional, physical and intellectual development. Through play, the child practices skills such as independence, creativity, exploration and problem solving. The child also gains social values and develops accompanying skills.

Psychologists and educators agree that play and educational games are important for the child's physical and intellectual development. Researches on the importance of play in the child's growth have proven that the first years in a child's life carry the most important results for his/her intellectual, social and physiological growth, thus the current concentration on making intellectual games that help develop the child's intellectual and social skills. Support to these notions comes from the fact that intelligence has been proven to be un-

stable at birth and the brain incomplete and changing with experiences. In the first three years, the child builds through play a complex brain that helps him/her walk, talk, analyze, love, play, discover and develop a balanced personality. This is not to neglect the effect of the environment. If the growth and development of these skills are neglected, the child's development will be irreparably impaired.

The child's simple movements during play enhance the brain's performance. Studies proved that play and motor activity increase in the brain the number of blood vessels that facilitate the movement of blood into the organ and increase oxygen supply, which in turn increase the brain's performance and productivity. The efficiency of motor activity and play is especially effective because they include sensual inputs that guarantee attention for longer spans of time and train the child to connect earlier experiences to current experiences, thus enhancing long-term memory and the retrieval of ideas. Taking part in activity and play develop and sustain a sense of motion. Dancing to rhythm and taking part in activity help the child develop an aware-

ness of his/her physiological presence, relation with the spatial dimension, sense of time, self-control and breathing regulation.

Which play is best for the child? Suitable play depends on the child's age group. Since play is a tool for the child to know the world around him/her and to grow, observing his/her skills are basic in assessing child play.

## The arts and the Brain's Cortex

Equally important in the brain development is the introduction of the arts in the child's daily life. The arts are means to know the individual's civilization and culture in their highest levels. They enrich the senses, thus enriching the brain, the body and the emotions together.

To show the importance of the arts, especially drawing, in the brain's development, it is important to note that the cortex's visual part is five times as much as the hearing part. It is not strange then that children learn more when visual stimuli are used. By teaching children to read through drawing (children draw letters and see them in drawings), children



Music, play and the arts are paradigms we use to re-describe the word and what surrounds us in different manners that connect us together by providing a rich fabric of time, place,

learn letters faster and learn and understand synonyms faster.

Educators notice a larger interest in reading in children who draw the contents of their books of reading, sciences, geography, civics and other courses. These children also show quicker learning and retrieval of information. A 20 percent increase in learning reading, writing and mathematics is shown in children who use visual arts.

## Neurology and the arts

The brain changes physically when we learn, and learning is stronger and more comprehensive when emotions contribute to it. Chemicals such as adrenalin, serotonin and dopamine change synapses; such changes are essential in learning; if no changes take place, learning does not happen. The point therefore is that the arts stimulate emotions, causing changes to synapses and thus allowing for learning. Changes in synapses also take place through training and polishing. We learn things by repetition, and we usually repeat what we care for, like and feel enthusiastic about. By nature, we like the arts and drawing and tend to repeat what we do in this regard. This is a healthy way of learning and thus of brain development, activation and changing.

Other things that we should know about neurology and the arts include the fact that enhanced chemicals, such as dopamine, affect the frontal cortex. Dopamine is secreted in the brainstem, the oldest part of the brain according to the natural selection theory. But dopamine

is especially effective in the new part of the brain, the part we use for making decisions, planning and ideating. When we create something, we feel encouraged. Thus, brain hormones affect education, encourage it, and create motivation.

Thus, learning the arts at home or in school is connected to motivation and interest. Children like the arts, drama, play and music and are creative in these domains. But they will also like mathematics, sciences and history if neurological chemicals in the brain are allowed to move and act to contribute to learning. These chemicals give children freedom, creativity and control of thinking and development.

Learning the arts is not just a mean for expression and moving emotions; the arts develop thinking skills, like learning styles and assimilating ideas, similes, accurate observation of the world, and abstraction of complexes. The arts also help the child perceive other people's experiences and deliver ideas to them. They are a group of skills and thinking methods that express all interests of the human being.

## Conclusion

Music, play and the arts are paradigms we use to redescribe the word and what surrounds us in different manners that connect us together by providing a rich fabric of time, place, characteristics and advices about how to build our lives. These brain talents are the result of the interaction between the human being and his/her environment that helps him/her persevere and survive. By using

music, play and the arts as a learning framework, the brain gets to acquire basic pieces of information that contribute to survival, development and growth.

Unfortunately, when schools want to cut down their budgets, they decrease or cancel musical or artistic activities. Schools also tend to include such activities in extracurricular activities instead of the regular daily curriculum. This happens while studies reveal more and more the importance of music, drawing and the arts on the intellectual, social and emotional development of the child's brain.

## References

- Buzzell, Keith. *The Children of Cyclops: The Influence of Television Viewing on the Developing Human Brain*. 1998 California: AWSNA.
- Campbell, Don. (1997) *The Mozart Effect: Tapping the Power of Music to Heal the Body, Strengthen the Mind and Unlock the Creative Spirit*. Avon Books
- Erickson R.J. Play contributes to the full emotional development of the child. *Education*. 1985;105:261-263
- Kaufman, B. (1976, November-December). Where every child is special. *Today's Education*, pp. 22-25
- Kuffler, P.M. (1980) *The role of the arts in general education*, Boston: Harvard Press.
- Newman, J., Rosenbach, J., Burns., K. Latimer B., Motocha, H., and Rosenthal Vogt, K. (1995) An Experimental Test of "The Mozart Effect": Does Listening to his Music Improve Spatial Ability? *Perceptual and Motor Skills*, 1995, 81, 1379-1387
- Pearce, Joseph Chilton. *Evolution's End: Claiming the Potential of Our Intelligence*. 1992 California: Harper San Francisco
- Robitaille, J. & O'Neal, S. (1981). Why instrumental music in the elementary schools?. *Phi Delta Kappan*, 63, p. 213
- Rauscher, F. H., Shaw, G. L., Levine, L. J., Wright, E. L., Dennis, W. R., & Newcomb, R. L. (1997). Music? training causes long-term enhancement of preschool children's spatial-temporal reasoning. *Neurological Research*, 19, 2-8
- Winston, E.W. (1982, December) 3 R's and an M, *Music Educators Journal*, p. 40

## Raising Children in Yemen, field study on behaviors and skills

**Higher Center for Motherhood and Childhood/Child Development Project, Yemen, UNICEF, Soul**

This booklet provides a study on raising children behaviors and activities in Yemen. The study is highly valuable because it is the first of a kind in Yemen, it reached interesting results, and it decided and analyzed factors of child survival and physical and psychological development. It is a threshold for further studies on the various aspects of early childhood; it also opens new horizons for workers with children and involved and responsible groups. The study sought to analyze the trends and activities of childcare providers on certain issues related to children between the ages of three and five. The main issues included healthcare for pregnant and breastfeeding mothers and for children, the concepts and means of child upbringing, the means of emotional communication with children, and the relation of these matters with the age of the parents when they got married, when they had their first baby, and the educational and social level of the family.

## Family Child Care Programs

**Tricia S. Kruse  
High/Scope Educational Research Foundation**

This book is supposed to help workers in family early childhood nurseries plan childcare programs and organize family childcare homes effectively in order to provide the child a suitable atmosphere for development, growth and interaction with peers and adults. The book especially addresses the following issues: planning an internal design for the home to suit children and their families, planning homes that suit activities for children from different ages, planning and executing activities for children of different ages and different development stages, observing children and developing lesson plans, facilitating conflict resolution among children, and communication with parents. It lists samples of daily programs for family care homes and addresses basic questions related to family care, such as preparing rooms, making use of space, daily programs, the interaction of children of different ages, the interaction of children with adults, and working with parents.

press@highscope.org

## Rethinking the Brain

**Rima Shore  
Families and Work Institute**

This book is based on the findings of a 1996 conference of neurologists and childhood experts on the theme "Brain Development in Young Children: New Frontiers for Research, Policy and Practice." Discussions focused on the importance of early brain development in improving the future of societies. The book is general overview of the latest findings of neurologists about the brain, suggesting how such findings can support and guide efforts to improve healthy development and education in children. It focuses on the brain's biological development in early childhood to support and prove the clinical theories of psychologists and psychotherapists on the importance of childhood in a human being's life. It concludes that the first years of a human being's life is full of chances and obstacles, and offers parents and educators help to make use of such chances and avoid such obstacles.

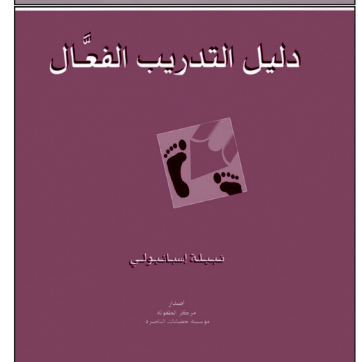
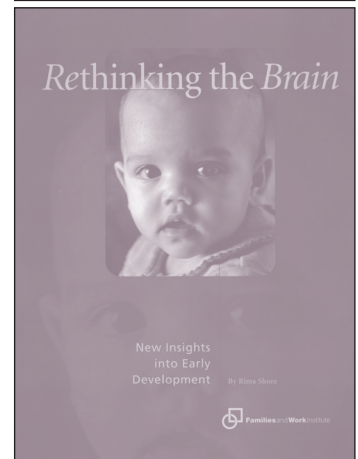
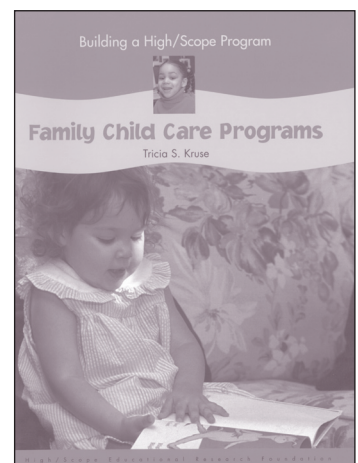
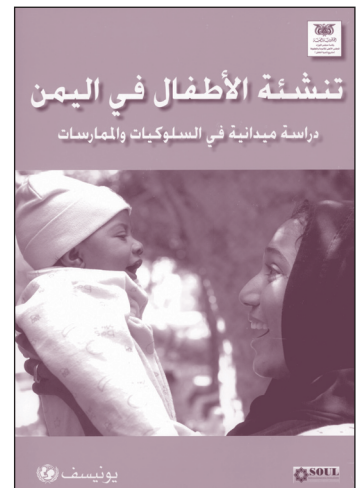
<http://www.familiesandwork.org>

## Effective Training Guide

**Nabila Espanoli  
Childhood Center-Kindergartens Institution**

This guide discusses training in general, not to specific training fields. It summarizes various reports of workshops and training work programs, mostly addressing early childhood workers. Any trainer can use it. Including plans for training workshops, study activities and workshop series, the guide can be a reference to anyone interested in making such planning. It is made up of two main parts, one dealing with training and its definition and compositions (supportive training vision, planning and preparing for training, executing training, documenting and disseminating information, and evaluating training), and the other including various appendices dealing with training, including a test of training needs, samples of various activities, icebreaking and evaluation.

<http://www.tufula.org>



## Play in Early Childhood

**Fadia Hoteit**  
**The Lebanese Committee for Educational Sciences**

The Educational Books Series

The book addresses kindergarten and early childhood education student teachers, teachers in general and parents. It is good reference and easy to grasp by student teachers. It discusses how play can be used to educate children by mothers and teachers, and curbs feelings of guilt by those who believe that when children are allowed to play, time is wasted. The book's five chapters define play and its function and development, and discuss the most important theories in this regard. It also discusses the various types and conditions of play and its relation to the development of children and their personalities, knowledge and brains in all stages of their lives. It explains how play can be a suitable educational method for children, which is in line with their spontaneity and activeness. It also explains the intermediary's role of play in carrying culture from one generation to the other and spreading values, stances and basic social knowledge, thus securing the child's social upbringing. The last chapter is dedicated to explaining how play can be a form of psychotherapy for children because it is an important tool of expression of their feelings and thoughts.

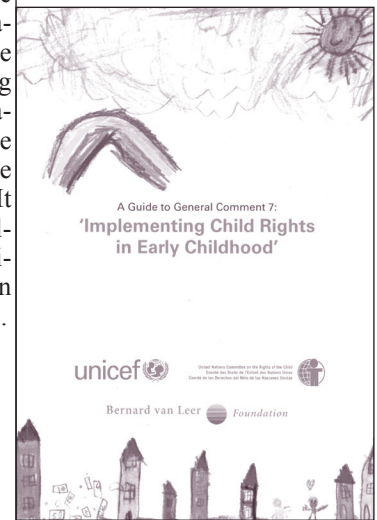
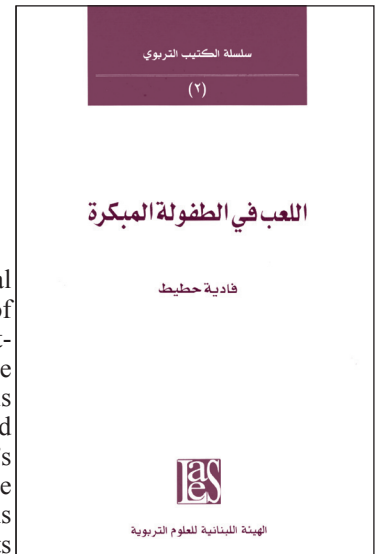
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## A Guide to General Comment 7: "Implementing Child Rights in Early Childhood"

**Bernard van Leer Foundation/ UNICEF**

This book is a summary of a day of general discussion by the Committee on the Rights of the Child in 2004 on the theme "Implementing Child Rights in Early Childhood." The day was held to spread awareness about this topic and issue recommendations on the need for a complete implementation of the Child's Rights Convention in early childhood. The committee adopted these recommendations after studies showed that the Child's Rights Convention is not being applied as a whole but only in terms of healthcare and educational issues. This report sheds light on the background of the discussion day, focusing briefly on the proposals of participating organizations. It includes materials related to the basic issue. It also discusses the results of the discussion day and the recommendations. It is especially beneficial to believers in children's rights, human rights activists, and university students and researchers focusing on law, social action and international relations.

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