

Games with rules, particularly sports, are generally governed by external rules. For this reason, some play advocates suggest that sports are not true play. Playing sports, however, has proven to be an effective way of teaching valuable interpersonal skills such as co-operation, teamwork, and tolerance. The Right to Play organization, founded in Canada and now operating around the world, is dedicated to promoting education through play and sports. It has as its motto, “*Take care of yourself. Take care of others.*” There can be many opportunities to participate in self-directed play through sports. If the expectations for sport games respect age-appropriate behavior and the goal is not necessarily who wins or loses, sports can be an enjoyable part of a child’s play world.

When children take the soccer balls outside, different games emerge. Two children set up a target on the wall and practice kicking the ball at the target. They decide what counts as ‘hitting the target’, and how many points are awarded for each target. Others begin to organize a soccer game, deciding on the goal line, what will serve as goal posts, and who will be the goalie. One child takes over and chooses the teams and some express the feeling that the selection process is not ‘fair’. The game begins, and after a while one of the goalies declares she wants to switch roles. Another child takes her place. There are arguments about a non-goal, but these quickly fade as the desire to keep playing is more compelling.

Each of these forms of play has something unique to offer. In an article featured in the New York Times (2008), Robin Henig examines why children play. She challenges the romanticized view of play and childhood as “too squishy” and searches the literature on animal play to find the essential purpose that play has in primate development. She concludes: “*Animal findings about how play influences brain growth suggest that playing, though it might look silly and purposeless, warrants a place in every child’s day ... a place that embraces all styles of play and that recognizes that play is every bit as essential to*

healthful neurological development as test-taking, Spanish lessons, or Suzuki violin.” As adults we may not understand the value of play, but we can appreciate and respect the place it has in the lives of our children.

A NEW LOOK AT LEARNING

In order to recognize the vital role of play in learning, teachers need to understand the connection between neuroscience and learning. Our profession is too often one in which the entrenched practices of an earlier day hold more sway than the valuable research of our day. We would not tolerate medical practices from a century or more ago, yet we base many of our expectations and practices in the classroom on just such traditions.

Neuroscience has tremendous potential for revolutionizing what goes on in schools. As McCain and Mustard (1999), play advocates observe, “*the merging of the neuroscience story with the developmental story has increased our understanding of how fundamental the first years of a child’s life are in laying the base for the future. We are beginning to understand the linkage between the way the brain develops and the neurological and biological pathways that affect learning, behavior and health throughout life.*” (p. 25) So much has been discovered over the years about how the brain learns that it is truly astonishing that education, by and large, makes so little use of this knowledge.

For a century, psychologists and other social scientists have developed learning theories. New research on how the brain develops adds to their findings. With knowledge of child development and neuroscience, educators are equipped to provide the very best learning opportunities for children. While teachers of young children have been most open to applying this knowledge, educators for all grades need to put it into practice. The process of learning does not change when the child moves from kindergarten to grade one,

Development of Play across the Primary Division			
Type of Play	Ages 4-6	Ages 5-7	Ages 7-9
Exploration	<i>What is it?</i> Properties and characteristics - Conservation of matter, spatial relations, etc. Mainly personal pursuit, interest.	<i>What can it do?</i> Investigation of concrete objects, as well as situations and events.	<i>What can I do with it?</i> Collaborative discoveries. Sharing ideas.
Pretend Play	Symbolic representation of one object for another. May cooperate, share space, toys, and theme but all participants may play the same role or do the same action Relying on personal experience as source for pretending.	Sociodramatic play soars. Themes include community such as riding a bus, restaurant, etc. The putting on of the play may take over from the actual play itself. Begins to differentiate complimentary roles.	Continues to rely on personal experience but beginning to use fantasy and make-believe. Roles work together to tell a story.
Games with Rules	Generally, play along side one another without much interest in how others are doing. Tends to make up rules as they go along.	Begins to attend to rules and turn taking.	Competition prevails with stringent attention to rules. Importance of being on the team becomes increasingly more critical.

or even from primary level to junior. At any age, learning is first and foremost the product of self-directed experience. As Bruner wrote so many years ago, *"We only truly know what we have discovered for ourselves"*.

Neuroscience helps us understand learning in the following ways:

- The brain is constantly changing. It is not a fixed mass. It is likely that how well the brain is shaped in the early years will have an effect on how well the brain functions in later life. It grows as a result of learning – one synapse at a time.
- Experiences change the shape of the brain. If we nourish our brains through many, varied interactions with people and things in our environment, we build the foundation for lifelong learning.
- Emotion has a profound effect on learning. When the learner feels safe, comfortable, and happy, learning occurs with ease. Tension, stress, and feelings of inadequacy inhibit learning.
- Motivation is the product of interest and engagement. Even those who have been labeled as having attention deficit disorders may concentrate for long periods of time when the activity is interesting and derived from personal needs.

With the understanding of the critical role played by experience and personal motivation, neuroscience supports the concept of a constructivist view of learning. This is not a new notion. In this view, the learner constructs knowledge from experience, and

assimilates new information into his or her existing cognitive map. In accommodating new information, new thoughts connect with existing frameworks to allow for more complex understanding.

Key points about learning and instruction:

Learning is social

- For centuries, we have assumed that learning in school must take place without social distractions. Isolating children by such practices as seating them in rows, giving them individual worksheets and assignments, and warning them, “no talking” and “do your own work”, act against learning.

It does not appear to matter if the subject of the children’s conversation is their classroom activity. The important thing is that the children are in contact with others. A silent classroom lacks something fundamental to learning, especially in the early years. Quiet times have a place, but the hum of creativity and friendship is a sign of a happy learning environment. Educators need to train their ear to the

difference between the noise generated by creative play and the noise generated by chaos. Play is a happy, playful tone while chaos is fractious and belligerent.

The social nature of learning means that communication is an essential element of play. Children learn through using language in the context of the situations that they have created. They use the semantics of language to create meaning, the structure of language to communicate their thoughts, and they explore the pragmatic uses of language as they interact with others. Oral language is a key component of literacy learning and has strong links to reading and writing. As children communicate during play, they use the vocabulary associated with the context. Again vocabulary is important for understanding the meaning of texts that are read and is critical to communicating ideas in writing.



THINK ABOUT IT

What are the opportunities for children to 'talk' and engage with others in the classroom? How are they using language? What is the focus of children's talk?

The human brain is wired to learn

- So many traditional practices in school are founded on the notion that learning is difficult for most children and that the brain would just as soon not bother. All children are compelled from within to learn. They do not need a series of lessons or happy face stickers to motivate them to learn how to walk and talk. This miracle of learning is witnessed by every parent, and by every educator, the world over. Yet, we fail to understand the internal desire to learn in terms of learning in school. As with all significant learning through life, this urge to learn comes out of a profound need to connect with the social and physical environment in which we find ourselves. In schools, an educator too often resorts to external rewards and punishments which, over the long-term, erode the power of the intrinsic, self-directed motivation to learn. Is it any wonder that by the time children are in high school, learning has become a matter of memorizing 'stuff', and feeding back to the teacher what he wants to hear. In other words, it becomes little more than trying to "guess what's in the teacher's mind".

As children are engaged in play, they make decisions, take control, seek solutions. When children are given the opportunity to make choices and decisions, they are empowered as learners and as such develop confidence in their abilities.



THINK ABOUT IT

If children are wired to learn, what are they interested in learning about? What intrigues them? What motivates them?

Learning is a holistic process

- The most beneficial condition for learning is when all areas of development – physical, emotional, cognitive, and social are proceeding as they should. This is such a common sense idea, how can we totally ignore this in so many school situations? We continue to value a quiet, tidy classroom when learning is often anything but quiet and tidy. How different the scores on a test might be if we recognize that a particular child has had no food, (it is toward the end of the month and the food

bank allotment has been used up), or that a child has been cowering under his bed all night, frightened by verbal or physical violence in the home, or if we acknowledge that some children simply do not perform well under pressure. Yet, we are keenly aware of the impact of stress upon our own productivity as adults. We despair of solving a logic puzzle or a computer glitch when we are worried, tense, or exhausted. It is only when we leave a problem until the next day that we find the solution has been staring us in the face all along.

For children, play is their way of growing – physically, emotionally, socially and cognitively.

Consider the learning for any age of children as they collaboratively build with hardwood blocks of different shapes and sizes. Cognitively, they learn about structures and balance as they create a building, they learn about symmetry as they create a 'balanced' look, they learn about position as they view the structure from various angles – front, side, back. They develop and use social skills

as they plan what to do, listen to each other's ideas, negotiate roles, and share materials.

Language develops through social use with others. As they engage with others, or an adult, they may use language to describe what they have done, to explain how it works, to reflect on problems and solutions.

They problem-solve when they try to find the block that will fit the space, when they have to change plans when the building isn't strong enough and collapses. Emotionally, they develop patience, persistence, and self-regulation as they try over and over to place the last block on the top without toppling the building. They develop confidence as they gain control over the materials and experience success.

Physically, fine motor skills continue to develop as they hold objects and insert them into place and try to balance and position blocks.

THINK ABOUT IT

How do the materials and activities support children's development in all areas?



Learning is neither an efficient process nor best generated through instruction

- The trouble with the natural process of learning is that although predictable, it is not a tidy systematic endeavor. There is a good deal of redundancy as a learner repeats an activity or explores an idea over and over again before it becomes permanently established. Centuries ago, educators found that rote learning was more efficient. The learner would simply



memorize what the teacher presented, and a base of knowledge built. A test could be given, and mastery assessed. It sounds compelling but it is not learning. Instead, it is what Vygotsky (1962) calls “parrot-like learning that masks a vacuum”. The knowledge and/or skill is not internalized.

THINK ABOUT IT

What is valued about learning in the classroom? How are children’s needs, interests, and background information accounted for in instruction?

- Instruction that relies on the learner being passive and uninvolved leads to the pervasive boredom that strikes so many students as they progress into high school. In his book, *Weapons of Mass Instruction*, John Taylor Gatto (2009) observes that it is not only the kids that are bored, but the teachers as well. The idealism and energy that propelled them into a career in education long since evaporated in the tedium of mandatory curriculum that excites neither teacher nor student.

THINK ABOUT IT

How do children have a ‘voice’ in the classroom? What are the opportunities for making choices and decisions?

to PLAY IS to LEARN

Play stimulates the brain. It offers children of every culture and background, without discrimination, the opportunity to learn the most important lessons of life. It has been said that play is the way children learn that which no one could teach them. This is a natural process of learning, not one in which information is systematically chopped up into a set of lessons and delivered to groups of children regardless of their readiness for them. Play is rooted in the experience, needs, interests, and culture of the individual. Play is the means children have of making sense of the world in which they find themselves. Studies show that children work at higher levels of cognitive function in play than they do at other school tasks.