

## THE RELATIONSHIP BETWEEN PLAY AND PHYSICAL EDUCATION LESSON

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Review paper

### Abstract

*Play is essential to development because it contributes to the cognitive, physical, social, and emotional well-being of children and youth. The right to play is a child's first claim on the community. Play is nature's training for life. No community can infringe that right without doing deep and enduring harm to the minds and bodies of its citizens. Play also offers an ideal opportunity for parents to engage fully with their children. Despite the benefits derived from play for both children and parents, time for free play has been markedly reduced for some children. Play is integral to the academic environment. It ensures that the school setting attends to the social and emotional development of children as well as their cognitive development. Physical education and play are two areas that are alarmingly neglected in the public school system. Positive experiences of play and physical activity can also enhance children and young people's mental health by building up their confidence, self esteem and resilience. It is also through play, both in the community and at school, that children develop friendships and a sense of belonging to a peer group.*

**Key Words:** motivation, game, physical activity, child development, teaching techniques

### Introduction

In 2008, the U.S. Department of Health and Human Services issued physical activity guidelines for Americans, ages 6 and older. These guidelines recommend that children and adolescents should participate in 60 minutes or more of physical activity daily. Students need access to physical activity throughout the school day to meet these recommendations (Health Education Authority, 1998; Burdette & Whitaker, 2005; Timken & McNamee, 2012). Schools can integrate physical activity throughout the school day by scheduling physical activity breaks and including physical activities during academic classes. Physical education lesson provides unique opportunities for children to move with ease and confidence as they enjoy actions such as running, turning, twisting, chasing, throwing, catching, striking, floating and balancing (Ginsburg, 2007; Pangrazi, 2009). They are encouraged to respond to challenges to the mind and body, to participate, to compete and to co-operate with others. From their earliest years children enjoy physical activities (Erikson, 1965, Pellegrini & Boyd, 1993; Smith, 1995; Tsao, 2002; Bernstein, Phillips & Silverman, 2011). Play is a term employed in psychology and ethology to describe a range of voluntary, intrinsically motivated activities normally associated with recreational pleasure and enjoyment (Millar, 1967; Winnicott, 1971; Zhang et al, 2011). Play is most commonly associated with children and their juvenile-level activities, but play can also be a useful adult activity, and occurs among higher-functioning animals as well (Tsao, 2002; Ginsburg, 2007). Play is so important to optimal child development that it has been recognized by the United Nations High Commission for Human Rights (2008) as a right of every child. Children today have fewer opportunities for outdoor play than their predecessors.

Environments for outdoor play are generally underutilized and the role of the adult in this is frequently passive. Play has physical, social, emotional and cognitive benefits for children. It has been suggested that opportunity for spontaneous play may be all that is needed to increase young children's levels of physical activity, an appealing concept in view of our burgeoning, societal obesity epidemics (Dietz, 2001; American Academy of Pediatrics, Council on Sports Medicine and Fitness and Council on School Health, 2006). If play is beneficial to children's health and well being, then it follows that depriving children of play would have harmful effects. Yet despite this plethora of reports warning us of the dangers of producing a nation of couch kids, children are leading increasingly sedentary lives. There is less playtime at school, and their out of school lives are dominated by organized activities or hanging out at home in front of the TV or computer (Dietz, 2001; Zimmerman & Christakis, 2005). Many children get a portion of the U.S. Department of Health and Human Services (2008) recommended 60 minutes of daily physical activity from games played during physical education lesson. Using popular children's games during Physical Education lessons can help maximize student participation and involvement while providing physical activity (Department of Health, 2004; Pangrazi, 2009; Bernstein, Phillips & Silverman, 2011).

### Definition of Play

The seminal text in the field of play studies is *Homo Ludens* by Johan Huizinga (1955). Huizinga defines play as follows: "Summing up the formal characteristic of play, we might call it a free activity standing quite consciously outside 'ordinary' life as being 'not serious' but at the same time absorbing the player intensely and utterly.

It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings that tend to surround themselves with secrecy and to stress the difference from the common world by disguise or other means." Play is often interpreted as frivolous; yet the player can be intently focused on his or her objective, particularly when play is structured and goal-oriented, as in a game. Accordingly, play can range from relaxed, free-spirited and spontaneous through frivolous to planned or even compulsive (Smith, 1982).

### Forms of Play

The National Institute for Play (Department of Health, 2004) describes seven play types: Attunement (which establishes a connection, such as between newborn and mother), Body (in which an infant explores the ways in which his or her body works and interacts with the world, such as making funny sounds or discovering what happens in a fall), Object (such as playing with toys, banging pots and pans, handling physical things in ways that use curiosity), Social (which involves others in activities such as tumbling, making faces, and building connections with another child or group of children), Imaginative (in which a child invents scenarios from his or her imagination), Narrative (play of learning and language that develops intellect), Transformative (by which one plays with imagination to transcend what is known in the current state, to create a higher state).

### Theories of Play

Since the early philosophers, people have been writing intermittently about children's play. Over time, the focus has moved from attempts to describe it to efforts to understand what children do when they are playing, and indeed the links between this and their development and learning (Erickson, 1985; Field, 2000). Modern and classical theories of play have identified the many ways in which play may affect children's wellbeing and advance their cognitive, social and emotional development (Takhvar, 1988). While freely engaging in play children acquire the foundations of self-reflection and abstract thinking, develop complex communication and metacommunication skills, learn to manage their emotions and explore the roles and rules of functioning in adult society. Sociocultural theorists discuss the overarching role of play in child development and view it as the most significant "leading" activity of the early childhood years (Vygotsky, 1978; Bodrova and Leong, 1996). Play theories are divided into 2 categories: Classical Theories (19<sup>th</sup> & Early 20<sup>th</sup> Century) and Contemporary Theories (after 1920).

### Classical Theories

1. *Surplus Energy* (Spencer). Schiller, a German philosopher, defined play as 'the aimless expenditure of exuberant energy'.

Play is the result of surplus energy that exists because the young are freed from the business of self-preservation through the activities of their parents. Energy finds its release in the aimless exuberant activities of play. Surplus energy theory contends that humans have a finite amount of energy that is used mainly for work and survival. Children tend to play more than adults, as children are not so involved in work and survival activity, and therefore have greater amounts of energy to expend. By discharging excess energy in play, balance is restored to the human body (Spencer, 1873).

2. *Recreation – Relaxation* (Lazarus 1883, Patrick 1916). Play is seen as a mode of dissipating the inhibitions built up from-fatigue due to tasks that are relatively new to the organism. Thus, play is found more often in childhood. Play replenishes energy for as yet unfamiliar cognitive activities of the child and reflects deep-rooted race habits. Play alleviates boredom while the natural motor functions of the body are restored.

3. *Pre-exercise – Preparation for adulthood* (Groos). Groos (1898; 1901) presented a biological explanation for play in his books, *The Play of Animals* and *The Play of Man*. Play is essential to later survival. The playful fighting of animals or the rough and tumble play of children are essentially the practice of skills that will later aid their survival. Hence play is the practice and development of capacities, like sex and fighting, to be used later in life. Thus, for Groos, the purpose of play was a preparation for life and is the necessary practice for behaviors that are essential to later survival. Play develops skills necessary for functioning as an adult. Criticism—children may practice what they see adults do, but they cannot know what will occur in the future.

4. *Recapitulation* (Hall). Play is seen not as an activity that develops future instinctual skills, but rather, that it serves to rid the organism of primitive and unnecessary instinctual skills carried over by hereditary. Each child passes through a series of play stages corresponding to and recapitulating the cultural stages in the development of the race (Hall, 1904; 1920). The general meaning of Recapitulation theory is that eliminate ancient instincts by reliving evolutionary history of the human species. Criticism—if evolution is still occurring, it should also be evident in play.

5. *Growth Theory* (Appleton). Play is a response to a generalized drive for growth in the organism. Play serves to facilitate the mastery of skills necessary to the function of adult behaviors.

6. *Ego Expanding Theories* (Lange - Claparde). Play is nature's way of completing the ego an expressive exercising of the ego and the rest of the personality; an exercising that develops cognitive skills and aids in the emergence of additional skills (Alderman, 1974).

### Contemporary Theories

In contrast to the classical theories, the modern dynamic perspectives seek to explain the content of play.

1. *Psycho-analytic – Cathartic Theory* (Freud). Freud's psychoanalytic theory of play was outlined in *Beyond the Pleasure Principle* (1920). Play as catharsis that allows children to rid of negative emotions & to substitute more positive ones in place. Express feelings through play. Through play, children dramatize the past, present and future. In this work, he explicitly conceptualized play as the repetition compulsion whereby a child wishes to constantly repeat or re-enact an experience. This he saw as the working out of his pleasure principle; the reduction of tension produced by the life instincts; and, when the experience was unpleasant, of the death instinct. The replacement of the pleasure principle, of which play is part, by the reality principle takes place phylogenetically in Freudian theory as well as ontogenetically within the individual child when its instinctual drives give way to reason.

2. *Infantile Dynamics* (Lewin). Play occurs because the cognitive life space of the child is still unstructured, resulting in failure to discriminate between real and unreal. The child passes into a region of playful unreality where things are changeable and arbitrary. The child plays because he is a child and because his cognitive dynamics do not allow for any other way of behaving. Play is an expression of the child's uncoordinated approach to the environment (Lewin, 1931).

3. *Meta-communicative* (Erikson). He is known for his theory (1965) on 'psychosocial development' and for coining the phrase "identity crisis". He was born out of an illegitimate affair and hence, the development of identity was one of his main concerns. Purpose of Play is: Play as ego mastery for emotional development, Play as social and Play as a lifelong phenomenon. Erikson's Play Levels are: Microsphere (Toys are used in two ways: Props for acting out their emotions and Tools to discover the limits of rules established by caregivers). Child gains mastery over the world as she controls toys and materials (Erikson, 1977). Macrosphere (The child develops a shared view of the world as she engages in sociodramatic play and games).

### **Cognitive theories of play**

1. *Play as Intellectual Development* (Piaget). His theory (1962) on play is based on his four stages of development namely: Sensorimotor stage (Through play, children learn the actions of movement and the senses and of object permanence (using their senses of touch, taste, hearing, seeing and smell), Pre-operational stage (Through play, children acquire motor skills), Concrete operational stage (Through concrete activities (hands-on activities and things that can be seen) and games with simple rules, children begin to learn to think logically, Formal operational stage (Through rules and instructions, children begin to learn to think abstractly and independently). Purposes of Play are: provides for wish fulfillment, play follows development and play allows children to sublimate reality through a process involving accommodation and assimilation.

Play reduces anxiety by giving children a sense of control over their world and an acceptable way to express forbidden impulses.

2. *Play as Rehearsal* (Bruner). He stated that one of the main functions of child's play was to rehearse actions to various real-life scenarios in a safe, risk-free environment so that when confronted with a difficult situation, it would not be so stressful (Bruner, 1972).

3. *Play as Preparation* (Dewey). Play is a subconscious activity that helps an individual develop both mentally and socially (Dewey, 1910). It should be separate from work as play helps a child to grow into a working world. As children become adults, they no longer "play" but seek amusement from their occupation. This childhood activity of play prepares them to become healthy working adults. His theories provided the basis for contemporary educational uses of children's play. To help children reconstruct their experience and gain meaning from it, children learn to function at higher levels of consciousness and action and teachers were to create an environment to nurture play that would support desirable mental and moral growth (Dewey, 1916).

4. *Play as Sensory Learning* (Montessori). According to Montessori method, which is still employed today in private schools, children would be best served spending their play time learning or imagining. Montessori play is sensory, using a hands-on approach to everyday tools like sand tables. The child sets her own pace, and the teacher is collaborative in helping the child play to learn. Montessori is particularly interested in how play developed the mind, body, brain and senses in terms of gaining greater awareness of properties through use of the bodily senses, sharpening abilities to gather and organize information and organize sensory impression (Fisher, 1992).

5. *Play as Social Development* (Vygotsky). He suggested that children will use play as a means to grow socially (1933). In play, they encounter others and learn to interact using language and role-play. Vygotsky is most noted for introducing the ZPD (zone of proximal development). This suggests that while children need their peers or playmates to grow, they need adult interaction as they master each social skill and are ready to be introduced to new learning for growth. His works included an emphasis on interpersonal relationships and on higher mental functions through interactions with significant people in an individual's life (Bodrova & Leong, 1996). His play theory emphasizes social development. He suggests that there is an ability level that children can reach but not without help from adults, which he refers to as a zone of proximal development, or ZPD. When children play, they give cues to adults about their readiness to learn new skills with assistance (Vygotsky, 1962; 1978). In conclusion, we can see from the above discussion that theorists hold quite fundamentally different views about the nature and purposes of play. Freud regarded play as having a strong affective purpose, Piaget argued for cognitive development through play.

While Vygotsky regarded imaginative play as liberating children from their immediate situational constraints. However, they all agree on one thing – that there are benefits for children when they play.

### **Play and Children**

In young children, play is frequently associated with cognitive development and socialization (Henry, 1990; Field, 2000). Play that promotes learning and recreation often incorporates toys, props, tools or other playmates (Erikson, 1977). Play can consist of an amusing, pretend or imaginary activity alone or with another. Some forms of play are rehearsals or trials for later life events, such as "play fighting", pretend social encounters (such as parties with dolls), or flirting (Winnicott, 1971; Bruner, Jolly & Silva, 1976). Modern findings in neuroscience suggest that play promotes flexibility of mind, including adaptive practices such as discovering multiple ways to achieve a desired result, or creative ways to improve or reorganize a given situation (Millar, 1967; Shonkoff & Phillips, 2000). Learning through play has been long recognized as a critical aspect of childhood and child development. Play also promotes healthy development of parent-child bonds, establishing social, emotional and cognitive developmental milestones that help them relate to others, manage stress, and learn resiliency (Schaeffer, 1993; Gagen & Getchell, 2006). According to Siraj-Blatchford & Sylva (2004) the most effective centers "play" environments were used to provide the basis of instructive learning. However the most effective pedagogy combines both teaching and providing freely chosen yet potentially instructive play activities. Freely chosen play activities often provided the best opportunities for adults to extend children's thinking.

### **The importance of Play in Physical Education**

All children need to play and be active. Play is essential to the healthy physical, social and emotional development of all children, and a fundamental part of childhood (Atkinson, 1964; Pellegrini & Boyd, 1993; Smith, 1995; Nutbrown, 2006). Play allows children to use their creativity while developing their imagination, dexterity, and physical, cognitive, and emotional strength. Play is important to healthy brain development (Shonkoff & Phillips, 2000; Tamis-LeMonda, Shannon, Cabrera & Lamb, 2004). It is through play that children at a very early age engage and interact in the world around them. Play allows children to create and explore a world they can master, conquering their fears while practicing adult roles, sometimes in conjunction with other children or adult caregivers (Cohn, 1990; Tsao, 2002). As they master their world, play helps children develop new competencies that lead to enhanced confidence and the resiliency they will need to face future challenges (Erikson, 1985; Band & Weisz, 1988; Hurwitz, 2003). Physical education lesson and play are two areas that are alarmingly neglected in the public school system.

Teaching physical education and play are as crucial to a child's development as any academic endeavor (Pangrazi, 2009). Perceptual motor skill development is directly related to central nervous system and how it processes information received from sensory organs throughout the body. Trained children can better process information regarding their place in space and time. Positive experiences of play and physical education lessons can also enhance children's mental health by building up their confidence, self esteem and resilience (Bernstein, Phillips & Silverman, 2011). It is also through play, both in the community and at school, that children develop friendships and a sense of belonging to a peer group (Coolahan, Fantuzzo, Mendez & McDermott, 2000; Harrist & Bradley, 2003). The insightful Rumbold report (Department of Education and Science, 1990) recorded that children need talk, play and first-hand experiences because these are powerful in the child's development and learning. The physical education programme which provides a wide variety of movement activities builds on these early experiences of the child. The physical education lesson should answer the needs of the child who looks forward to it with a sense of anticipation and excitement (Zhang et al, 2011). As far back as 2001, the British Medical Journal reported that the main solution to the obesity crisis should be to reduce television viewing and promote playing (Dietz, 2001). Play is integral to the academic environment. It ensures that the school setting attends to the social and emotional development of children as well as their cognitive development. It has been shown to help children adjust to the school setting and even to enhance children's learning readiness, learning behaviors, and problem-solving skills (Fisher, 1992; Coolahan, Fantuzzo, Mendez & McDermott, 2000). Social-emotional learning is best integrated with academic learning; it is concerning if some of the forces that enhance children's ability to learn are elevated at the expense of others. Play and unscheduled time that allow for peer interactions are important components of social-emotional learning.

### **Physical Education in a Child Centered Curriculum**

When implementing the programme, the school, building on the principles of variety and diversification, should consider:

- The importance of enjoying physical activity (Zhang et al, 2011). The child who associates fun and enjoyment with physical education lessons and who gains a sense of achievement will develop the positive attitudes so necessary for continued participation in physical education lessons and physical activity (Cryz & Toriola, 2012).
- The importance of play in its many forms in the learning and developmental process. Through play the child learns to move effectively, to think, to interact socially with others and to express feelings (Cohn, 1990; Timken & McNamee, 2012).
- Maximum participation by all children in the physical education lesson.

The desire by children for active participation can be seen as the starting-point for the teacher when planning and implementing physical education lessons. Lessons which can be identified as successful in achieving the pre-determined objectives will inevitably be those where the children were active throughout the entire lesson (Whitehead & Hendry, 1976; Pangrazi, 2009; Zhang et al, 2011).

- The development of skills and increasing understanding of the activities which the children are experiencing. As the skills are developed there should be an emphasis too on increasing the child's understanding of the activities is engaged in (Zhang et al, 2011; Cryz & Toriola, 2012). This can be achieved by adopting appropriate teaching methods where discussion is an essential part of the process.
- Providing a balance between competitive and non-competitive activities. Activities incorporating some elements of competition can benefit the child as he/she progresses towards the achievement of his/her potential. The positive opportunities presented include the development of respect for opponents, rules and classmates as officials.
- Providing a balance between contact and non-contact activities. The needs of the individual child should be considered when selecting suitable activities. A balance should be sought which, for example, allows the child who favors non-contact activities to enjoy those activities and yet be able to engage in contact activities, where possible modified to suit his/her needs.
- Providing opportunities for achievement for each child. It is essential that the child be presented with achievable tasks, regardless of the activity he/she is engaged in.

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The satisfaction of achievement is the factor that motivates many children to continue to participate in physical activity (Atkinson, 1964).

- Providing activities equally suitable for girls and boys. Activities which have traditionally been associated with either sex can be presented, sometimes with modifications, to a mixed class. Single-sex classes should be exposed to a range of activities from all six strands where possible, thus ensuring that a balanced programme is presented to them (Alderman, 1974).

## Conclusion

School physical education (PE) classes provide the best opportunity to fulfill the motor and health related fitness needs of virtually all children. PE teachers, in particular, have the potential to influence public health by promoting pupil participation in physical activity and assisting students to establish a lifetime habit of regular involvement in physical activity (Burdette & Whitaker, 2005). Participation in physical activity during childhood can aid the development of motor abilities and lay the foundation for good health, especially cardiovascular health (Zhang et al, 2011). Play is essential to the healthy physical, social and emotional development of all children, and a fundamental part of childhood.

Positive experiences of play and physical education lessons can also enhance children's mental health by building up their confidence, self esteem and resilience (Alderman, 1974; Cryz & Toriola, 2012). It is also through play, both in the community and at school, that children develop friendships and a sense of belonging to a peer group.

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## RELACIJE IZMEĐU IGRE I NASTAVE TJELESNOG ODGOJA

### Sažetak

*Igra je esencijalna za razvoj zato što doprinosi kognitivnoj, fizičkoj, socijalnoj i emocionalnoj dobrobiti djece i mladih. Pravo na igru je dječji prvi zahtjev u zajednici. Igra je prirodni trening za život. Nema zajednice koja može oduzeti to pravo bez dubljeg ulaska i istrajanja na šteti koja se vidi na pameti i tijelu njenih građana. Igra također nudi idealnu mogućnost roditeljima da potpuno sudjeluju s djecom. Neovisno o koristi deriviranoj iz igre za oboje, za roditelje i djecu, vrijeme za slobodnu igru je značajno reducirano za neku djecu danas. Igra je integralni dio akademskog okruženja. Osigurava da škola postavlja brigu za socijalni i emocionalni razvoj djece baš kao i njihov kognitivni razvoj. Tjelesni odgoj i igra su dva područja koja se alarmatno zanemaruju u javnim školskim sustavima. Pozitivna iskustva igre i tjelesnih aktivnosti mogu također i obogatiti mentalno zdravlje djece i mladih izgrađujući njihovo samopouzdanje, samoprocjenu i fleksibilnost. Također, kroz igru u zajednica i u školi, takvo dijete razvija prijateljstva i osjećaj pripadnosti ravnopravno u grupi.*

**Ključne riječi:** motivacija, igra, tjelesna aktivnost, dječji razvoj, tehnike učenja

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THE RELATIONSHIP BETWEEN PHYSICAL ACTIVITY & ACADEMIC PERFORMANCE - SPARK by Dr. John Ratey. SPARK: "A groundbreaking exploration of the connection between exercise and the brain's performance that shows how even moderate exercise will supercharge mental circuits to beat stress, sharpen thinking, enhance memory, and much more." "Schools play a vital role in ensuring children and adolescents get the nationally recommended 60 minutes of physical activity each day...A CSPAP is a multi-component approach by which school districts and schools use all opportunities for students to be physically active, meet the nationally-recommended 60 minutes of physical activity each day, and develop the knowledge, skills, and confidence to be.