PLAY AND THE YOUNG CHILD:
A STUDY OF PLAY AND
THE EFFECTS OF PLAY ON CHILDREN
FROM A TEACHER AND STUDENT PERSPECTIVE

By
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ABSTRACT

This project encompasses a great deal of information pertaining to the topic of children’s play and recess. Part I presents a rationale for the project and the subsequent research. It also defines play and presents an overview of the controversy surrounding the issue of recess in school settings. A brief description of the methodology of the study and the research context conclude Part I.

Part II reviews several theories and definitions of play with a focus on the most recent theories governing current understanding of children’s play. In this section, several types of research studies are reviewed including research regarding the most appropriate context for play, studies that focus on children’s behaviors, and studies that focus on parental views of play. Part II concludes with a summary of research based effects of play in several domains: physical, cognitive, psychological, and social.

The methods, context, and results of the current study are described fully in Part III. Fifty-seven Delaware County teachers and eight administrators were surveyed regarding the time allocated for recess, the advantages and disadvantages of play, and the effects of recess on children’s behavior. An analysis of the results examines results in terms of differences between teachers and administrators, variations between grade levels, and variations between schools.

Part IV includes a discussion about the controversy currently surrounding recess in schools. Information from both sides is presented and discussed in references to recent research and the findings of the current study.
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Play/Recess: A Context for Study

Pellegrini and Smith (1993) define recess as “a break period, typically outdoors, for children.” In American schools, the recess period is defined differently by each school and typically lasts 15-20 minutes (Pellegrini, 1995). In light of a growing body of research, several educational organizations have developed position statements regarding recess. In fact, The National Association of Early Childhood Specialists in State Departments of Education (NAECS/SDE, 2002) asserts that “recess is an essential component of education,” and that “children must have the opportunity to participate in regular periods of active, free play with peers.”

Over the past 20 years, there have been several ethnological studies focusing on children’s’ behavior before, during, and after recess. A few surveys have also been collected to determine the amount of time allocated to recess in elementary schools (Pellegrini, 1995). There has not, however, been a large amount of data collected to express teacher and administrator views of play. Specifically, the advantages and disadvantages that professional educators observe as children engage in free play on a regular basis.

A study that focuses on professional educators’ experiences and observations could yield valuable data about the true value of play for children and the impact of recess breaks on children’s behavior in the classroom. Furthermore, a study that focuses on several schools with varying recess policies and time allotments could provide information that implicates trends in postrecess behavior in relationship to the time allocated for recess. Several studies have examined the effects of shortening or lengthening the period of confinement before recess and
the actual recess activities on postrecess attention, but few have focused on the relationship between the time allocated for recess and children's postrecess behavior (Pellegrini & Smith, 1993; Pellegrini & Davis, 1993).

This study could also provide valuable information about a highly controversial issue. Recess has recently become a divisive issue in many educational circles. A survey by the American Association for the Child's Right to Play shows that 40% of schools have cut or plan to cut time from recess (NAECS, 2002). Pellegrini and Smith (1993) identify two main reasons that schools are inclined to abolish recess: loss of instructional time and aggression or antisocial behavior that might occur. On the contrary, Elizabeth Jones (2003) points out that we are living in a changing world. Because of this she states that "social problem solving is a life skill everyone needs more and more, as we encounter people who are not like us (Jones, 2003)." This is an issue that will not likely be resolved easily, but that warrants further research and study to ensure that schools and educators are making decisions based on research that reflects the child's perspective, teacher's perspective, and parent's perspective. This particular study will provide insight into the teacher and child perspectives of recess and its impact on students.

**Methodology**

In this study, the survey method was used to gain insight into how teachers and administrators view recess or free play. Data was collected regarding time allocated to recess, the extent to which children chose their own activities, advantages and disadvantages from observations of children's play, and the general effect of play on children's classroom behavior. Several open-ended survey questions ensured that the survey did not restrict responses and enabled participants to include a wide variety of observations from their personal experiences.
Due to the broad nature of this study and the need for a significant number of responses, a survey was the most effective and efficient means of collecting information.

Research Context

This study began in January 2004 and ended in April 2004. The survey was distributed to seven Delaware County superintendents in Indiana. Of the seven school districts, six chose to participate in the study. Subsequently, surveys were distributed to the twelve elementary schools under the direction of the participating superintendents. Of the twelve schools, ten chose to participate in the study. Surveys were distributed throughout February and March, 2004 and were collected in the months of March and April, 2004. Participation was voluntary and the number of responses from each school varied from two to thirteen with an average of five to six responses per school. This study was conducted independently by one undergraduate student in conjunction with a supervising instructor. The study was designed to investigate the effects of recess that educators in the field perceive and to present a collective analysis of these findings.
Numerous theories and definitions have come forth throughout the past century in an attempt to describe what play is and why children play. This next section will provide an overview of the most prominent theories and several defining features of play that are commonly agreed upon.

Research identifying the effects of play was once uncommon, but in the past 20 years, several key studies have shed some light on this topic. This next section will also examine several of these studies, their structure, participants, and findings.

Definition and Theories of Play

It is well known that all species play, but a precise definition of “play” still eludes researchers. Several researchers have identified several characteristics of play that are commonly agreed upon. Tovah, Wirth, and Linas (2003) identified seven defining characteristics of play: “positive affect, active engagement, intrinsic motivation, freedom from external rules, attention to process rather than product, and nonliterality.” “Play enriches the thinking of children and provides them with opportunities to create, invent, reason, and problem solve (Stone, 1995/96).” In essence, play is developed, controlled, and enjoyed by the child. It is a time of freedom from outside rules where children are free to explore and experiment in a setting that is natural to them.

Several key theories have been developed in the past century to describe why children engage in play. Herbert Spencer (1896) identified play as an outlet for energy that the human body is designed to use on a daily basis. Now that less energy is needed to survive, he proposed
that children needed to expend that energy through play (Elkind, 2003). Karl Groos (1898) and Maria Montessori (1912) concluded that play is preparation for adult life (Elkind, 2003). The more recent theories of Jean Piaget and Lev Vygotsky are given the most attention in this study. Piaget was the first to focus on play as a means of developing intelligence by constructing knowledge, while Vygotsky concentrated on the social learning aspects of play (Elkind, 2003). Because of their impact on recent research in children’s play, these two theories will be discussed in more depth below.

Piaget theorized that children learn by encountering new situations in which new information must be either assimilated into our existing schemes, or our existing schemes must be altered to accommodate the new information. Hoorn, Nourot, Scales, and Alward (2003) state it this way: “[Assimilation] allows us to make sense of our experience in light of what we already know. The accommodation process challenges us to change and adapt our mental structures in the face of new information.” When children play, they are constantly encountering new experiences that require them to construct new understandings through these two processes. As children develop, they progress through various types of play that contribute to their cognitive and social learning. According to Piaget, infants begin by engaging in functional play, toddlers begin to engage in symbolic play, preschoolers become increasingly involved in constructive play, sociodramatic play with other children follows shortly, and finally children are able to engage in games with rules with their peers (Hoorn et al, 2003).

Vygotsky's work reflects the social nature of children. Due to the social nature of children, he believed that learning occurs when confronted with conflict and the need to problem solve. He also believed that children learn through scaffolding (Hoorn et al, 2003). Children have a zone of proximal development in which they are able to build upon previously acquired
skills to master new skills. Vygotsky (1967) declared that “play is the source of development and creates the zone of proximal development (Hoorn et al, 2003).” In the process of social learning, children learn about basic social rules that will enable them to function in the adult society.

History of Research

Research studies focusing on children’s play have tremendously enhanced current understands of play. These studies can be categorized into four groups: context/environmental studies, child-based studies, parent-based studies, and educator-based studies. Each area of research will be discussed in the following section.

Play: Context Research

Research regarding the most appropriate play contexts for children has focused on the spatial arrangement, materials, and time allocated to play. The spatial arrangement of a room can impact children’s play. Bateson (1955) found that partitioned areas of about 25 square feet were optimal for social and dramatic play (Christie, 1991). Field (1980) also found that smaller spaces partitioned off from the rest of the classroom were better for school behaviors including verbal interaction, fantasy play, and cooperative play (Marrow & Rand, 1991). Pellegrini (1982) found that the housekeeping and block areas yielded increased language abilities, especially when placed together (Marrow & Rand, 1991).

Materials that are available contribute to the type of play in which children will engage. Dramatic play is encouraged by props, dolls, and blocks. Constructive play is encouraged by blocks, paints, and crayons (Christie, 1991). Realism, or the extent to which a toy resembles the real object, determines how children will use it in play. Toys that are highly structured and
realistic often have only one use and limit the child's creativity. Toys that are less realistic leave the child with many possibilities of how to use that toy. Two-three year old children need highly realistic toys, but 4-5 year olds are more creative when using less realistic props. Many children still prefer and play more, however, with highly realistic toys (Christie, 1991). In arranging a classroom to support play, it is important to ensure there is an appropriate balance of realistic and generic, unstructured toys appropriate to the children's ages.

Children also need time to play. It takes time for them to recruit other people, determine roles, identify make-believe objects, and agree on a story line. Bateson (1955) suggests at least thirty minutes is necessary for high-level sociodramatic play to occur (Christie, 1991). This research demonstrates that teacher and environmental structures for play can greatly impact the type and quality of play that occurs.

Child-Based Research

There is a growing body of research that reflects the impact of play on children's cognitive and social competence. Marrow (1989) conducted a study with one control group and three experimental groups that involved some degree of manipulating the literacy materials available during play. In each experimental group, literacy materials were placed in centers and in two groups, students were given instruction that included suggestions of how to use the materials. Three weeks of observations were completed before the interventions occurred; these observations revealed very little literacy behavior. Results of the study found that there were no differences in literacy behavior for the control group, small changes for the group with materials but no instruction, an increase (especially in writing) for the group with unthemed materials in the housekeeping/block areas, and the largest increases in the group that was given thematic literacy materials during play along with guidance on how to use them (Marrow & Rand, 1991).
Many studies have also focused on children's prerecess, recess, and postrecess behaviors. In a 1980 study, Smith and Hagan found that children who were confined for longer periods played with a higher level of intensity when allowed to play (Pellegrini and Smith, 1993). Children were also found to become less attentive as they sat for longer periods of time in a study conducted by Pellegrini & Davis (1993), in which the confinement period before recess was shortened and lengthened. As they examined prerecess behavior, recess behavior, and postrecess behavior, Pellegrini and Davis drew conclusions similar to those of Hagan and Smith: when children are confined for longer periods of time the intensity of recess behavior increases. Another interesting finding was that social sedentary behavior increased during the recess time while physical activity declined. This implies that children benefit physically from short recess breaks, but need longer recess breaks in order to enhance social skills and to foster new friendships. Pellegrini, Huberty, and Jones (1995) verified earlier findings that children's inattention increases during longer periods of confinement and that inattention is higher before recess than after, but found no direct relationship between recess behavior and postrecess behavior. This finding indicates that it may be the break itself rather than the specific activities that help students focus better. Pellegrini and Bjorklund (1996) explain that a break enables people to learn better and faster because their efforts are distributed rather than jammed together and overwhelming. Tasks that are spread apart seem less boring and are more likely to hold sustained attention from children.

Some variations to these studies revealed that vigorous play led to lower levels of attention while sedentary play led to higher attention levels after recess (Davis 1993 as cited in Pellegrini & Smith, 1993). Higher levels of attention after recess also resulted from a study performed by Jarrett, Maxwell, and Dickerson (1998). This study was designed so that
participating children did not normally have recess, thus eliminating the possibility that increases in inattention before recess was due to the expectation and subsequent delay of recess. "The recess break appeared to have a renewing effect, decreasing their off-task and fidgety behaviors;" just as breaks in the adult work day offer an opportunity to refresh and return to work more focused (Jarrett, Maxwell, & Dickerson, 1998).

**Parent-Based Research**

The amount of research showing parent opinions and beliefs about recess is growing. There are a few large studies, but many are independent surveys and crusades for recess occurring in individual communities. The LEGO Institute conducted one of the largest empirical studies in 2002 to determine parental attitudes about free play and organized activities. Over 3,000 parents in five countries participated in telephone interviews as part of the study. The end results revealed that 94% of parents agree that there is educational value in play, but the parental definition of play is expanding. Nearly 65% include video games, 55% include television, and 38% include shopping as play activities. These trends correlate with a more technologically advanced and consumer based society (LEGO, 2002). Surprisingly, despite their beliefs that children learn while playing, many parents are leaning towards organized, scheduled activities. At the same time, their definitions of play are changing to match a changing culture.

**Educator-Based Research**

There are few studies pertaining to the educator's view and the composition of recess in the elementary school. Those studies that have been conducted reflect rather positive opinions of recess, despite the current trend of eliminating or reducing recess. In fact, "in a 1991 National Association of Elementary School Principals (NAESP) survey of 383 elementary and middle
school principals, most agreed that recess has educational value, particularly if well-organized and well-supervised by adults. Those surveyed recognized the social value of recess as well; despite problems that crop up when active children play, survey respondents agreed that recess is worthwhile for children (Dramstad, 1999)."

In regard to the composition of recess, the NAESP conducted a survey in 1989 of state superintendents and found that 90% of school districts reported having some type of recess lasting on average 15-20 minutes (Pellegrini, 1995). Since then, reports from the American Association for the Child’s Right to Play shows that 40% of schools have cut or plan to cut time from recess (NAECs, 2002). It is the inconsistency in research and practice that has sparked the current study of educators in the field to determine their opinions of recess and the composition of recess in their school.

Participants of Past Research

Past research has focused primarily on ethnological studies of children to determine the effects of recess on children’s behavior before and after recess. One 1989 survey by the National Association of Elementary School Principals focused on administrators to determine the amount of time allocated to recess (Pellegrini, 1995). Another study, by the LEGO Learning Institute (2002), and several parent-initiated studies surveyed parental opinions of recess and free play. Even fewer studies have included the teachers who work with children on daily basis as key participants. In this respect, this study will yield different types of data than previous studies.

Summary of Research

Play, itself, does not have a single, clear definition. Rather there are several key components that experts agree are essential to play: a child’s free choice, positive affect, active
engagement, intrinsic motivation, no external rules, and a focus on the process (Tovah, Wirth, and Linas, 2003). Theories of play along with its definition have evolved over the years. Two commonly accepted theories of play come from Piaget and Vygotsky. Piaget’s theory examines play as a cognitive activity, while Vygotsky’s theory focuses on the social aspects of play.

Studies can be categorized into four groups: context/environmental, child-based, parent-based, and educator-based. Research performed to determine the most appropriate context for play revealed that small, contained spaces best support sociodramatic play. A period of at least 30 minutes appears necessary for children to organize sociodramatic play (Bateson, 1955 as cited in Christie, 1991). Realistic materials were found to be most beneficial to young children and less structured toys were most effective for eliciting higher levels of mature play in 4-5-year-olds (Christie, 1991).

Studies focusing on children’s behaviors have been conducted to determine links between play and literacy and play and attention to cognitive tasks. Marrow (1989) found significant links between the availability of literacy materials during play and the number of literacy behaviors (Marrow & Rand, 1991). Pellegrini and Davis (1993) discovered that when children are confined for longer periods of time the intensity of recess behavior increases. Further findings imply that children benefit physically from short recess breaks, but need longer recess breaks in order to enhance social skills and foster new friendships (Pellegrini & Davis, 1993). No direct relationship was found between recess behavior and postrecess behavior, but attention to academic tasks increased after a recess break (Pellegrini, Huberty, and Jones, 1995). For the most part, research has consistently proven that breaks during the day help children to become more attentive. Further research is needed to verify what, if any, link exist between the actual recess behavior and postrecess behaviors.
Parent and educator-based studies are less prevalent, but those that do exist provide interesting information. The LEGO Institute’s parent survey revealed that a majority of parents believe play has educational value, but still tend to lean towards structured activities for their children. A 1991 NAESP survey of 383 principals, demonstrates that most educators also agree that recess has educational value. Unfortunately, the American Association for the Child’s Right to Play found that despite these beliefs 40% of schools in the United States are considering the reduction or elimination of recess.

**Recent Research Implications for Children: Physical, Social, Psychological, Cognitive**

In an overview of research, it was found that outdoor play is a means by which children develop imagination, reasoning skills, and social/emotional skills (Waite-Stupiansky & Findlay, 2001). “Play gives children opportunities to understand the world around them, interact in social ways, express and control emotions, and develop their symbolic capabilities (NAEYC, 1996).” This section will summarize the physical, social, psychological and cognitive implications of play/recess occurring within the school setting.

**Play Impacts Physical Development**

Recess provides “opportunities to engage in physical activity that help to develop healthy bodies (Council on Physical Education for Children, 2001).” Pellegrini and Smith (1998) identified three types of physical activity play: rhythmic stereotypies, exercise play, and rough-and-tumble play. The latter two are of importance to this overview of research because they are believed to peak in early childhood and middle childhood, respectively. Exercise play builds endurance and strength while rough-and-tumble play serves social purposes, especially for boys.
Considering recent statistics that show in the state of Indiana, only 45.9% of children are getting the recommended thirty minutes of exercise per day five days per week, opportunities for children to exercise are greatly needed (Center for Disease Control - CDC, 2001). The decreasing levels of leisure physical activity are another indication that children need a structured time during which they have the chance to exercise their bodies (CDC, 2001). Along with this decrease in physical activity, the American Academy of Pediatrics (2003) also reports that more than 25% of children watch more than 4 hours of television per day, and that this amount of television viewing is correlated with higher rates of obesity. Obesity is becoming an issue of great concern, in part, due to decreases in physical activity.

According to the CDC, Surgeon General and Pediatrics, “as many as 25% of children and adolescents are overweight (2000).” More specifically, the American Academy of Pediatrics (2003) reports that 15.3% of 6-11-year-olds are overweight. This percentage is double what it was 30 years ago (Indiana Department of Education, 2001). According to Greg Wilson, Commissioner for the Indiana State Department of Health, Indiana’s children have an obesity rate that is 5-6% above the national average (Commission on Excellence in Health Care, 2003). One risk factor that Dr. Wilson addressed was sedentary behaviors. Free play during recess is one opportunity during the day where children are able to be physically active in an attempt to stop and even reverse the trend of increasing obesity and related medical problems in our culture.

Obesity is of growing concern due to the potential health problems associated with obesity including: cardiovascular diseases, type 2 diabetes, mental health issues such as depression and low self-esteem, orthopedic complications, and many more (American Academy of Pediatrics, 2003). Suzanne Crouch, Health and Physical Education Consultant, who cites a 330% increase in obesity over the past 25 years also cites a 1000% increase in type 2 diabetes,
which is associated with obesity and inactivity (Commission on Excellence in Health Care, 2003). To combat the problem, she proposes that children be given 30-60 minutes of outdoor activity each day. In agreement, the American Pediatrics Academy (2003) recommends the promotion of unstructured play in all settings as one avenue of battling the increasing problem of obesity.

Physical activity implications of play are not solely focused on weight issues. Children experiment with gross and fine motor skills on the playground. They also exercise important muscles, including the brain. Exercise has been linked to increases in the amount of blood flowing to the brain, which enhances growth and increases neural connections (NAECS, 2002). Physical movement also enables children to gain perceptual abilities beyond the two senses (sight and sound) used for computers, books, and video games (NAEYC, 1998). It is the experience of freely experiencing and physically interacting with one’s environment through chosen activities that makes recess a unique opportunity for children’s physical development. Because the benefits extend beyond exercise, the Council on Physical Education for Children (2001) recommends that “recess should not replace physical education” and “recess should not be viewed as a reward.”

Play Impacts Social Development

The National Association of Early Childhood Specialists (NAECS, 2002) asserts that children benefit from play socially by developing a respect for rules, self-discipline, an appreciation of other cultures, and an understanding of which behaviors results in acceptance from peers. Children are also able to “practice life skills such as conflict resolution, cooperation, respect for rules, taking turns, sharing, using language to communicate, and problem solving in situations that are real (Council on Physical Education for Children, 2001).” Simple
observations of children on the playground will reveal many social aspects to play. In fact, the teachers surveyed in the current study identified the social benefits of play even more frequently than exercise (Graph 1.1).

Different types of play can result in different types of social interactions. Perry (2003) breaks pretend play into three phases: initiation, negotiation, and enactment. During the initiation phase, children are learning how to make initial social contacts with peers. Teachers can offer helpful advice to children during this phase by modeling how to use oral language to join play activities. The negotiation phase allows students to practice with social interactions, communication, understanding other perspectives, and working through disagreements. During the final phase of enactment, children are engaged in the play episode and continue using language and more fine-tuned social skills (Perry, 2003). The social skills learned through play enable a child to build confidence and form friendships. Children who do not learn these essential skills are at higher risk for rejection, school drop out, delinquency, and mental health problems (NAEYC, 1996). As children learn essential social skills during play, they also encounter maladaptive social reactions such as aggression or bullying.

Pellegrini (1995) addressed concerns about aggressive behavior. He estimated that aggressive behavior is minimal during recess and accounts for only 2-3% of all behavior. Although, the issue of aggression remains somewhat problematic, the positive social skills appear to outweigh the risk of encountering such behavior. Aggressive behavior and bullying are issues in which recess monitors need to be better trained in order to prevent and intervene with those behaviors. Appearance can also be deceiving; rough-and-tumble play (sometimes misread as aggression) is used by predominately by boys to assert dominance and assess peers.
This type of play has also been linked to a child’s ability to interpret emotional expressions (Pellegrini & Smith, 1998).

Social benefits of play may not be immediately evident during a recess period. Pellegrini and Davis (1993) found that shorter recess periods appear effective for short bouts of physical activity, but social interactions take longer periods to fully develop. These findings imply that in order for recess to yield both physical and social benefits for students, the period of time allocated must be of sufficient length.

**Play Impacts Psychological Development**

High level or mature play “has a positive effect on the development of foundational skills including cognitive and emotional self-regulation and the ability to use symbols (Bodrova & Leong, 2003).” The emotional aspect of this self-regulation is learned through play by “labeling feelings and reflecting on emotional content (Tovah et al, 2003).” Children also need to learn to regulate the amount of stress that they feel and identify positive ways to deal with this stress. The National Association for the Education of Young Children (1998) recognizes that “unstructured physical play is a developmentally appropriate outlet for reducing stress in children’s lives.” Stress experienced by young children is often the result of emotional experiences that children can work through during play. Some children benefit from acting out stressful situations in sociodramatic play, others prefer to express themselves through art, and some just need time to move around and release every day tension after sitting still for a period of time.

Children also make another important psychological gain through play by developing a sense of self. Mead (1934) focused on play as a means for children to develop a sense of self. She believed that children learn about themselves as a social object and then begin to generalize
social roles according to their culture. In doing this, children are able to “try on feelings, beliefs, and intentions of those separate from themselves in role play (Hoorn et al, 2003).” As a result, children gain a sense of self-competence as they interact with others, deal with emotions, and work to resolve conflicts during play (NAEYC, 1996). The psychological effects of play are also intertwined with the cognitive effects as is described by Tovah (2003): “The internal excitement derived from discovery and mastery nurtures children’s innate desire to learn.”

**Play Impacts Cognitive Development**

“Play does not compete with foundational skills: through mature play, children learn the very foundational skills that will prepare them for the academic challenges that lie ahead (Bodrova & Leong, 2003).” Elkonin, Vygotsky’s student, found play to be an important factor in building a foundation for later learning. He identified four positive effects of play on the development of delayed gratification, cognitive decentering, mental representations, and deliberative behaviors (Bodrova & Leong, 2003). Recent research not only shows connections between play and cognitive behaviors, but between play and brain development (Shore, 1991).

“Physical exercise, including recess, actually enhances brain function (Waite-Stupiansky & Findlay, 2001).” Jensen (1998) found that the area controlling movement, the cerebellum, is also a “virtual switchboard of cognitive activity (Waite-Stupiansky & Findlay, 2001).” Other research supports the idea that children need a break from cognitive tasks in order to regroup. Young children benefit from the break that recess provides because they lack the ability to clear their short-term memories of excessive amounts of incoming information without the drastic change of pace that a break such as recess provides (Pellegrini and Smith, 1998). The inability to clear their short term memory occurs because children’s nervous systems are not as developed as adults and are more susceptible to interference from outside sources while they are learning
Non-task oriented time allows young children to clear their minds and return more refreshed (Pellegrini & Bjorklund, 1996).

"Success in our rapidly changing world depends on being able to think creatively and quickly (Jones, 2003)." Two skills that are practiced best through open-ended activities like play that require students to think of responses and solutions to problems on the spot (Jones, 2003). Children, who learn through open-ended play, learn how to deal with the unexpected and to solve problems through trial and error (Jones, 2003). One reason that children tend to learn better through play is that play is natural to them (Hall, 1991). Sedentary play appears to be the most effective means of increasing attention to cognitive tasks. In fact, Pellegrini and Davis (1993) found that attention to cognitive tasks were negatively correlated with vigorous activity, but positively correlated with sedentary recess activities. A finding that needs further investigation to determine whether this decrease in attention is directly related to the vigorous activity, or if other factors such as gender preference toward the cognitive task have a role.

These early cognitive skills build the background that children need in order to be successful academically (Elkonin, 1977, 1978, as cited in Bodrova & Leong, 2003). One area of particular interest for young children is literacy. "Studies reveal that children are intensely interested in the object called print. They are curious about it, constantly puzzling out why it is there and what it does (Hall, 1991)." Children will integrate things that they are curious about into their daily play. In turn, the additional exposure to print aids children in learning more about it and forming new schema. To demonstrate that children learn about literacy during play, Hall conducted a study of children in a literacy rich environment, and the video-recorded the results showed 290 literacy events over a 4-day period (Hall, 1991). Bessell-Browne (1985) also found ten ways kindergarteners use literacy in play: oral language, information, to share personal
information, self-expression, to confirm identity, to present information, to support memory, to meet economic needs, to imitate models, and to reflect on the official status of an activity (Hall, 1991). "The physical environment is an essential, supportive, and active influence on the learning and teaching of early literacy (Marrow & Rand, 1991)." Providing a literacy-rich environment creates meaningful opportunities for children to demonstrate and expand their knowledge of literacy. "Not only does play help children develop skills and concepts necessary to master literacy and math, it also builds the foundation for more general competencies that are necessary for the children to learn successfully in school and beyond (Bodrova & Leong, 2003)."

Bodrova and Leong researched play interventions based on Vygotsky's idea of scaffolding in order to help children move from immature play, which does not contribute significantly to academic development, to mature play, which helps children build necessary skills (Bodrova & Leong, 2003). Adults play a key role in helping children expand their play so that it becomes mature, complex play in which many cognitive and social skills are practiced. In mature play, children learn by trying out new hypotheses, manipulating their environment, and observing the results; all of which occur naturally in play. This process continually builds and reshapes mental structures (NAEYC, 1996).

**Areas targeted for further research**

The results of current studies have led to several suggestions for the future study of play and recess. Pellegrini and Smith (1993) recommend examining the correlation of children's temperament and recess behaviors. Pellegrini (1995) also proposes more in-depth study to determine any cross-sectional relations between social competence and outdoor play. Also, future brain research could result in more tangible data that demonstrate the effects of play on children. It has also been realized that exercise increases blood flow to the brain and enhances
the formation of neural connections (NAECS, 2002). Further research could lead to amazing discoveries about exactly when and how these connections are formed, as well as, how to support healthy brain development through school curriculum. Questions that might be considered include: How often do children need mental breaks in the day? At what age is brain development impacted by play? What types of connections are made through various types of play (constructive, sociodramatic, etc.)?

Summary of Implications for Children

Wiate-Stupiansky and Findlay (2001) summarize recess as “the single venue that provides students with the irreplaceable and unparalleled opportunity to refresh their brains, exercise their hearts and muscles, choose their own activities, make friends, work out problems, and have fun.” Physically, children are decreasing their chances of becoming obese and thus decreasing their risk of many associated health problems. Children are also developing muscle coordination, balance, and perceptual abilities. Socially, children learn to develop friendships, to resolve conflicts, and to negotiate during play. “[Recess] is one of the few times when children can interact with their peers on their own terms with minimal adult intervention (Pellegrini, 1995).” Social and physical benefits of play are intertwined with the psychological benefits which include higher self-esteem, identification and regulation of emotions, and the ability to work through difficult issues (Tovah et al, 2003). Children who are not obese will likely have a higher self-esteem as will children who have learned how to form and maintain friendships. The American Association for the Child’s Right to Play (2004) recognizes that play helps facilitates a child’s development of self-esteem and a sense of belonging. The final aspect of development impacted by play is in the cognitive domain. Play is the natural medium through which children develop foundational skills that will impact later academic achievement (Bodrova & Leong,
2003). “Not only does play help children develop skills and concepts necessary to master literacy and math, it also builds the foundation for more general competencies that are necessary for the children to learn successfully in school and beyond (Bodrova, 2003).” Kantrowitz and Wingert (1989) state it this way: “the most effective way to teach young kids is to capitalize on their natural inclination to learn through play.”
PART III
A STUDY: PLAY AND THE YOUNG CHILD

Teacher/Administrator & Student Surveys: Play and the Young Child

This study was conducted independently by an undergraduate student at Ball State University. The intention of this project was to gain information about the effects of play on children from the perspective of professional educators and students. Participants included teachers, administrators, and a small group of students.

Several important sources of data were reviewed in this study. All survey participants indicated the amount of time allocated for recess and whether or not activities were freely chosen. These findings allowed for later analysis of time allocated for recess and teacher ratings of student behavior. Participants also freely listed advantages and disadvantages of recess based on their experiences. Lastly, teachers and administrators rated student behavior after recess as: extremely negative, slightly negative, no impact, slightly positive, or very positive. Children responded to the question: “Do you think that children need recess at school?”

Data was gathered and entered into Excel spreadsheets as a large group, by grade level, based on their subgroup (teacher, administrator, or child), and by school. Graphs were then designed to create visual representations of the findings.

Description of the setting and population

This study was conducted in the public schools of Delaware County. Letters and surveys were first mailed to the superintendents of seven local school corporations to obtain their approval. After obtaining approval from six of the seven corporations, letters and surveys were delivered to the twelve elementary schools in the participating corporations. Ten of the twelve schools chose to participate. Most of the educators worked in small, rural schools and
participated on a voluntary basis. Parental permission was obtained to survey students. Students surveyed were second-graders who attended a small, rural school where they participated in two recess breaks per day.

Data Sources

Surveys were collected from each of the ten participating schools during the months of March and April, 2004. Surveys and additional written comments from the teachers, administrators, and students were the only source of data for this study.

Analysis

As surveys were collected, they were first reviewed for completeness. All completed surveys were then entered into a primary Excel spreadsheet designed to show all records from all schools as well as smaller spreadsheets designed to show records by grade level, school, and sub-group. Graphs were created to depict the most commonly identified advantages, disadvantages, and responses regarding the effect of play on behavior. Comparison graphs were also created to demonstrate and differences between grade levels and schools. Further analysis was performed to determine any relation between the amount of recess allocated and the rating teachers gave to children’s behavior after recess.
PART IV
UNDERSTANDING THE EFFECTS OF PLAY:
AN ANALYSIS OF TEACHER, ADMINISTRATOR,
AND STUDENT OPINIONS OF RECESS/PLAY

Due to what that NAECS (2002) notes as an “alarming trend toward the elimination of recess during the school day,” it is imperative to understand what professional educators think about having recess in their schools. The NAECS cites increased academic standards and accountability as the primary reasons many schools are electing to eliminate recess. This study will aim to determine whether teachers in Delaware County, Indiana have similar feelings, or if they feel that recess is an integral part of the school day.

Advantages and Disadvantages Identified by Delaware County Teachers

On this portion of the survey, teachers responded by listing advantages and disadvantages they have observed in recess on a regular basis. Not surprisingly, many of the responses given by teachers are those that have been previously discussed as findings in current research. Social skills topped this list of advantages by far with 74% of teachers reporting that they observed the social benefits of play on a regular basis. Included in the category of “social skills” are behaviors such as forming friendships, resolving conflicts, and getting along with others. Benefits such as exercise, a break/stress release, and energy release were each identified by slightly more than 40% of teachers. Other benefits identified included: fresh air, gross motor skills, learning to play, creativity, increased attention, fun, problem solving, teacher interaction, mental refreshness, educational/learning, making free choices, and calmer behavior. For an overview of the advantages of play identified by teachers refer to Graph 1.1.

Disadvantages were also listed by teachers, but to a much lesser extent. In fact, the answer most commonly given was “none.” Graph 2.1 illustrates that 32% of teachers see no
disadvantages in having recess. Pellegrini and Smith's (1993) theory that recess is being eliminated in part due to a loss of instructional time was somewhat supported in this study with 19% of teachers agreeing that losing instructional time is a disadvantage of having recess.

Pellegrini and Smith (1993) also predicted that schools were deleting recess due to anti-social behaviors. Fourteen percent of the teachers in this study identified problems with disagreements and bullying, indicating that it is a valid concern, but not one that is overwhelming. Injuries and regaining control of the class are the only other two disadvantages identified by over 10% of the teachers. Other disadvantages listed by less than 10% of the teachers include: rule breaking, not enough recess time, taking games too seriously, not knowing how to play, monitoring, inadequate equipment, running on a full stomach, and bad weather. For an overview of the disadvantages of play identified by teachers refer to Graph 2.1.
Advantages of Play/Recess for Children
Identified by 57 Delaware County Teachers

Disadvantages of Recess/Play for Children
Identified by 57 Delaware County Teachers
Advantages and Disadvantages Identified by Delaware County Administrators

Administrators identified the same top four advantages to recess as teachers: exercise, social skills, energy release, and a break/stress release. Administrators, however, prioritized these benefits in a slightly different manner. Exercise was the most common response among administrators with 75% observing this benefit (See Graph 1.2). In comparison, only 42% of teachers identified exercise as a benefit of recess. Social skills placed second with 63% of administrators identifying this benefit. This slight difference could be due to the fact that teachers may be more likely than administrators to observe children’s interactions on playgrounds up close. Administrators may be more likely to observe from a distance or passing by, in this instance exercise play is more noticeable than social play. Half of the administrators also felt that recess provides a break/stress relief and an energy release for students. Other less common advantages identified were: mental health, fresh air, creativity, increased attention, fun, problem solving skills, free choice, calmer behavior, and brain development.

Administrators listed disagreements/bullying as the biggest disadvantage of recess (38% - see Graph 2.2). Loss of instructional time, which was listed as the number one reason by teachers, is listed as second highest disadvantage (25%) by administrators. Thirteen percent of administrators saw no disadvantages of recess. This percentage is significantly lower than the 32% of teachers who recorded no disadvantages. Other disadvantages identified included: rule breaking, injuries, competitiveness, regaining control, taking games too seriously, not knowing how to play, and monitoring play. In general, disadvantages were recorded by a higher percentage of administrators than teachers. This may or may not reflect a more negative view of play/recess, but is not surprising considering it could fall to the administrator to ensure that students are engaged in academic activities for a majority of the school day.
Graph 1.2
Advantages of Play/Recess as Identified by
8 Administrators in Delaware County

Graph 2.2
Disadvantages of Recess/Play as Identified by
8 Administrators in Delaware County
Effects of Play on Children's Behavior - Teachers

Jarrett, Maxwell, and Dickerson (1998) performed a study with results indicating that "the recess break appeared to have a renewing effect, decreasing their off-task and fidgety behaviors." Teachers in Delaware County may be observing very similar behaviors. When asked to rate children's behavior after recess as extremely negative, slightly negative, no impact, slightly positive, very positive, or both negative and positive, a significant majority of 60% responded by answering very positive (Graph 3.1). Another 23% felt that behavior after recess was slightly positive. This means that over 80% of teachers are observing some behavior improvements following recess. No teachers felt that behavior was extremely negative, 7% saw some slightly negative behavior, 5% saw no difference, and another 5% saw both positive and negative impacts on behavior.

Graph 3.1
Effects of Play on Children's Behavior
as Reported by 57 Teachers in Delaware County
Effects of Play on Children’s Behavior - Administrators

Administrator responses regarding the impact of play on children’s behavior differed slightly from the teachers, but still indicated positive impacts. Only two responses were selected by administrators: slightly positive and very positive (illustrated in Graph 3.2). While a majority of teachers felt that behaviors were very positive, administrators felt that behaviors were only slightly positive (63%). Thirty-eight percent of administrators, however, felt that recess had a very positive impact on behavior. The slight difference in teacher and administrator opinions may be due to the fact that administrators, for the most part, deal with troublesome behaviors following recess. Graph 3.3 portrays the differences between teacher and administrator responses.

![Graph 3.2](image_url)

Graph 3.2
Effects of Recess on Children’s Behavior as Reported by 8 Administrators
Effects of Play on Children's Behavior: Differences between Grade Levels

Teachers at almost every grade level observed very positive effects of play on children's behavior. The exception occurred at third-grade where teachers identified very slightly positive and very positive behaviors equally (40% each – Graph 4.1 & 4.2). Slightly negative behaviors were identified by both kindergarten and first-grade teachers, but appear to have vanished for the second-grade teachers. Third grade teachers seemed somewhat ambivalent. Teachers reported less very positive behavior and more mixed positive and negative behavior. In the fourth-and-fifth-grade, teachers recorded slightly negative behaviors in small percentages. Very positive behavior increased from the 40% at third-grade to 70% in fourth-grade. It was anticipated that behaviors might become more negative as children progressed through school, but no significant
increase was found. The decrease to no negative behavior resulting from recess in second-grade implies a u-shaped curve. Children just beginning school demonstrate more negative behaviors; but, as they learn new social skills, those could begin to diminish. As children get older, however, new social issues and challenges could arise and some negative behaviors reappear. Graphs 4.3-4.8 (in back) present survey results at each grade level.
Effects of Play on Children’s Behavior: Differences between Schools

The ten schools participating in this study responded that play has a generally positive impact on children’s behavior. There are, however, some significant differences between school ratings. Schools 1, 3, 4, 6, 8, 9, and 10 all reported very positive behavior effects more frequently than any other behavior effects. Schools 2, 5, and 7 also reported significant percentages of very positive behavior effects, but reports of slightly positive effects or a combination of positive and negative were reported just as frequently (see Graph 5.1). It was considered that differences between schools might be related to the amount time for recess. An examination of the time allotted for recess, reported by teachers in each school, revealed significant differences between grade levels within the same school. For most schools, there was not a consistent time required for recess across grade levels. The grade level time differences will be discussed later. Looking at the average times given for recess in each school, it does become evident that the schools with less recess time reported more negative effects. Schools 2, 3, 7, and 8 each reported recess periods of twenty minutes or less (on average). Of these schools, 3 and 7 account for two of the three schools indicating negative effects of play on behavior: twenty-nine percent of teachers in school 3 and 20% of teachers in school 7 observed negative behaviors after recess. This trend, however, cannot be generalized to all schools with less than twenty minutes of recess because schools 2 and 8 reported mostly positive effects. It also appears that results are more varied for schools where more teachers responded to the survey (see Graphs 5.3-5.12, in back). Other factors may have affected the results of this survey such as whether teachers are in charge of recess supervision or whether other school employees or volunteers are in charge.
Effects of Play on Children’s Behavior: Differences between Times Allocated for Recess

Teacher surveys were broken down once again – this time in search of a relationship between the time children spend playing and their behavior afterward. The most commonly set time for recess was 21-30 minutes (reported by 22 of the 57 teachers). Another 20 teachers reported a time of less than 20 minutes. Six teachers indicated recess periods of 31-40 minutes, and the remaining seven teachers had 41-50 minutes of recess daily. Looking at these numbers, it is obvious that more teachers had recess periods lasting less than 30 minutes. The question remains: How does this relate to children’s behavior and development? Schools reporting less than 30 minutes of recess had more varied responses on the behavior effects (See Graph 6.1). In the 10-15 minute time frame, 10% of teachers observed slightly negative behaviors and only 55% reported very positive effects on behavior. The very positive effects on behavior remained consistent in the 21-30 minute bracket, but there was a slight decline of slightly negative behaviors with only 5% of teachers responding. Fourteen percent of teachers in the 21-30 minute category, however, felt that play had a combination of positive and negative impacts on
behavior. While these results indicate mostly positive results, they dim in comparison to the results reported by teachers having recess periods of more than 31 minutes. Very positive behavior reports reached 83% when teachers reported having 31-40 minutes of recess and peaked at 86% when teachers reported having 41-50 minutes of recess. It may appear that the longest recess period yields a more positive impact on children’s behavior, but there is also the reappearance of slightly negative behaviors as reported by 14% of the teachers when recess lasted longer than 41 minutes. During recess periods lasting 31-40 minutes, there was a very large percentage (83%, Graph 6.1) of very positive behavior effects and the rest reported slightly positive effects. In this time frame, there were no reports of negative effects on behavior.

Pellegrini and Davis (1993) found that short recesses are physically beneficial, but that it takes a longer recess period for children to engage in social behaviors. If this is true, then it may be that more teachers in the middle time ranges for recess (31-40 minutes) found it to be more positive because their children were given enough time to practice social skills, but not so much that they became bored thus engaging in negative behaviors.
Student Opinions on Recess

In addition to reflecting teacher and administrator perspectives on play, this study also sought to express student opinions of recess. For this reason, 14 second-graders were surveyed as part of this study. Parental permission was obtained before surveying the students and students were not informed of the intent of the survey at the time they completed it. Initially, students ranked 11 school subjects (art, English, gym, lunch, math, music, reading, recess, science, social studies, and writing) according to which they enjoyed the most. Graph 7.1 illustrates the top five school activities as determined by activities ranked in the top three most frequently by the second graders. Art was actually at the top of the list (50%) followed by gym and recess at 43% each. Writing and science placed 4th and 5th with 29% of students placing them in the top three. Seventy-one percent of students ranked recess in the top five subjects (Graph 7.2). Additionally, students were asked to list their three favorite parts of recess and their three least favorite parts. Graph 7.3 shows the top three reasons given by students to describe why they like recess. The most frequent response given by 57% of students was swinging; tag and friendship followed with a close 43% each. The final question on the survey asked students whether or not they thought that students need to have recess at school. The results of this survey were somewhat surprising, but reflect only a small sample of students. When responding to the need for recess during the school day, 64% of students agreed that kids needed to have recess. The remaining 36%, however, felt that students did not need to have recess at school (See Graph 7.4).
Top 5 Activities
(ranked most often by students as their favorite part of school)

Graph 7.2
Where Does Recess Rank with Kids?
Graph 7.3
Favorite Parts of Recess

Graph 7.4
Students: Do You Need Recess?
Summary

This study contributes the professional opinions and observations of educators to a growing body of research about play. Common advantages of recess listed by educators were identical to the benefits cited in recent research studies. The most common advantage identified by teachers was some variation of social skills. Pellegrini (1995) identified recess as a time when children could interact with peers on their own terms. Waite-Stupiansky and Findlay (2001) agreed that recess enables children to practice problem solving and conflict resolution—two very important social skills. Over 40% of teachers also believed that children benefited from having a break to relieve stress. The National Association for the Education of Young Children (1998) also identified play as “a developmentally appropriate outlet for reducing stress in children’s lives.” Another teacher-identified advantage, exercise, is widely supported by many organizations in an effort to decrease obesity and encourage healthy development. The American Pediatrics Academy (2003), for example, recommends the promotion of unstructured play in all settings as one avenue of combating the increasing problem of obesity. Although administrators prioritized the advantages in a slightly different order, these three benefits were still at the top of the list. In essence, these educators have reemphasized the findings of recent studies and indicate that researchers are on the right track.

The disadvantages described by educators in this study are also a reflection of the concerns addressed in several recent studies and publications. There was, however, an interesting finding in this study that has not appeared in much of the current research. Thirty-two percent of teachers and 13% of administrators reported that they feel there are no disadvantages of having recess. There were many other disadvantages identified by the remaining educators surveyed, but for the most part these disadvantages were each identified by
less than 20% of the teachers surveyed. Disadvantages were reported more often by administrators than by teachers; a possible reflection of their responsibilities in dealing with negative behaviors and ensuring that children receive adequate instructional time. Coming in second and third to “none” in the list of disadvantages were loss of instructional time and disagreements/bullying. These two disadvantages are also the two main reasons that some schools are choosing to eliminate recess according to Pellegrini and Smith (1993). But, in the words of one third-grade teacher surveyed: "The benefits of play are far greater than the loss of time spent out of the classroom."

In regard to the effects of play on behavior, teachers had a more positive impression of recess than did administrators. An overwhelming majority of both teachers and administrators, however, felt that play had a slightly or very positive effect on children’s behavior. This study did not attempt to determine the effects of particular recess behaviors, but of the general impact that the recess break had on children. The general positive effects reported by educators in this study could refer to increases in attention or decreases in fidgetiness as reported in other studies, but no specific behaviors were identified in this study. Recent research by Pellegrini, Huberty, and Jones (1995) found that children’s inattention increased during longer periods of confinement and inattention was higher before recess than after, but found no direct relationships between recess behavior and postrecess behavior.

Children identified play as an important part of their school day, but not to the extent expected. Only 64% of children felt that recess was a necessary school activity (Graph 7.4). Children’s reported activities indicate that they are participating in activities that will enhance their social and physical well-being (playing with friends, tag, and swinging).
PART VI
A DISCUSSION: PLAY AND ITS PLACE IN SCHOOL SETTINGS

Recess or unstructured free time in schools has become an issue of recent controversy in the public schools. The recent debate has divided many educators into two groups – those who support recess and those who support the deletion of recess. Supporters on both sides of this issue raise valid concerns. The following is a summation and discussion of the concerns and views presented on both accounts in reference to the current study.

A Summation of Reasons for Elimination of Play/Recess from Curriculum

The American Association for the Child's Right to Play reported that 40% of schools in the United States are considering reducing or deleting recess from the curriculum (NAECS, 2002). The question many ask is why. Researchers propose that there are two primary reasons behind the decision to reduce the amount of time given to recess: loss of instructional time and aggressive or antisocial behaviors (Pellegrini & Smith, 1993). These two reasons are supported in the current study as valid concerns of teachers and administrators (Graphs 2.2 & 2.2). The current study yielded another valid concern – that of student injuries.

Increased Accountability & Loss of Instructional Time

The NAECS (2002) cites reasons such as increased academic standards and accountability as the primary reason many schools are electing to eliminate recess. The push for increased academic achievement in schools has led many schools to the conclusion that other less academic activities should be abolished so that more time can be devoted to academic learning. One administrator in this study stated: "I wish we could have more time for PE/recess, but there is only so much time in the day and we are under pressure to teach academic
standards." It is a pressure that is not likely to disappear anytime soon and schools will face the challenge of meeting higher expectations and standardized test scores. Several important pieces of information that schools need to consider before eliminating recess will be discussed at a later point.

Aggression & Antisocial Behavior

Disagreements among children are not uncommon. As children experience new situations and encounter new people, conflict will inevitably arise. These situations have the potential to be positive learning opportunities for children, but concerns arise when children’s behavior becomes aggressive or evolves to bullying peers. This is an issue that concerns nearly 40% of administrators surveyed. Recess is the time during a school day when many of these behaviors are more likely to occur due to its unstructured nature and, at times, lack of supervision. Beyond truly aggressive situations, educators also find themselves facing children who engage in rough or even violent play. Levin identifies three reasons children engage in war and superhero play – exposure to violence, a need to feel powerful, and violent media/toys (2003). She also identifies four major concerns expressed by teachers about children’s engagement in violent play: safety, old approaches to banning this play do not work, the play is usually limiting, and what children are learning from this type of play (Levin, 2003). Violence on the playground or play that looks violent raises many concerns about student safety. Some schools have chosen to reduce the amount of unstructured time for students in an attempt to reduce violent play, bullying, and antisocial behavior.
Safety Concerns

A final topic of concern that has led some officials to reduce recess periods is safety. The National PTA (2004) reported that the U.S. Consumer Product Safety Commission Handbook for Public Playground Safety documented over 200,000 injuries due to playground equipment proving that this is a valid concern on the part of administrators. It was also estimated that nearly 40% of the playground injuries could have been prevented through appropriate supervision. The solution, then, may not require the abolishment of recess, but more training for recess supervisors.

Schools cite academic concerns, injuries, safety, and supervision issues as their primary reasons for eliminating recess (NAECS, 2002). Behind each of these reasons lies a valid concern for the well being of students. Eliminating recess is one way of resolving some of these concerns, but at what expense? In the next section, ideas will be presented that offer alternative solutions to eliminating or reducing recess periods.

A Summation of Reasons for Sustaining Play/Recess in Curriculum

Despite the valid concerns voiced by school officials, there is mounting evidence that children need to play. The United Nations recognized the need for children to play in their Declaration of the Rights of the Child, Article 7 which states: “The child shall have full opportunity for play and recreation which should be directed to the same purposes as education; society and the public authorities shall endeavor to promote the enjoyment of this right (American Association for the Child’s Right to Play, 2004).” Even an online parent poll revealed that when asked whether recess should be eliminated from the school day, 97% said “no” (Education World, 1998). NAEYC (1998) reported that due to lack of adult supervision (increased workweeks), children do not have as much free time to play outdoors. This implies
that children who do not have outdoor recess at school are often not experiencing the many benefits of play previously discussed.

When considering the increasing push towards academics in schools, it is important to note that simply dedicating more time toward academic tasks may not benefit children or their achievement. Children are not developmentally able to sit and soak up information for long periods of time. Children cannot sit still for long periods until age 10-11 due to frontal lobe immaturity (Kantrowitz, 1989). In a 1998 study, Jensen discovered that the area controlling movement, the cerebellum serves as a “virtual switchboard of cognitive activity (Waite-Stupiansky & Findlay, 2001).” The American Pediatrics Academy and the Commission on Excellence in Health Care both recognize the need for children to participate in physical activity during the school day. Schools in Canada that increased the time spent in physical activity (P.E. and recess) experienced higher scholastic achievement levels (Waite-Stupiansky & Findlay, 2001). Recess also provides a much-needed mental break for many children. Pellegrini and Smith (1998) report that young children need the opportunity to clear their minds, but that they lack the ability to clear their short-term memories without the drastic change of pace that a break such as recess provides (Pellegrini and Smith, 1998).

The concern about antisocial behaviors such as aggression and violence is more difficult to address. Pellegrini (1995) discovered that aggressive behaviors are actually minimal and account for only 2-3% of all recess behavior. The reason that these behaviors may seem so prevalent is that they tend to stick out in people minds more so than typical behaviors. In this light, the positive social skills that children gain through play outweigh the potential for maladaptive behaviors. In fact, the NAEYC (1996) corroborated that children who do not learn these essential skills are at higher risk for rejection, school drop out, delinquency, and mental
health problems. Through play children are able to learn how to negotiate and resolve conflicts that arise in a natural setting. In addressing issues of violent play educators can “encourage children to talk with adults about media violence (“Approaches to Working...” 2003).” This article also suggested using open-ended questions when children bring up topics of violence in order to determine their current understanding and misconceptions. This provides a good opportunity for teachers to correct misconceptions and help students feel safer. Another suggestion would be to work with families to reduce the amount of violence in media and in toys that children see (“Approaches to Working...” 2003). Eliminating recess is not the only option in reducing antisocial behaviors. In fact, it is a time when teachers can observe children’s behaviors in a natural setting in order to identify any troublesome or maladaptive behaviors and intervene.

Injuries were another major concern of those who support the elimination of recess. Children are bound to endure some injuries regardless of their activities. Recess is a prime time for injuries due to the physical nature of activities. The National PTA, however, suggests that providing adequate supervision could have prevented 40% of playground injuries (Olsen et al, 2004). Regular checks of playground equipment and the enforcement of safety rules could also aid in reducing the number of injuries that occur on playgrounds.

Play is an important aspect of child development more so now than in the past because many children are not experiencing rich, imaginative play in other settings. Bodrova and Leong (2003) assert that this is true due to social settings that lack older play mentors, higher academic expectations, and more realistic toys. Children benefit immensely from play, and it is more important now than ever to ensure that children are able to experience “opportunities to create,
invent, reason, and problem solve’ within the school setting because they are not necessarily experiencing these opportunities outside of school (Stone, 1995/96).

Summary

The benefits of play for young children are undisputed, even by many school administrators, teachers, and parents who support the elimination of recess. The controversy today appears to focus on how time at school should be spent. Reviewing the cognitive implications of play; the educational value of play makes it a logical part of the school day. “Unfortunately….there is evidence from countries (including the United States) that play is being marginalized, even farther from the school curriculum (Hall, 1991).”

Those who support the reduction of recess identify loss of instructional time, antisocial behaviors, and injuries as their primary reasons. Those who are fighting to keep recess in the school day cite many cognitive, social, psychological, and physical benefits. Cognitively, children learn foundational skills that will provide a base for future academic work (Bodrova & Leong, 2003). Socially, they practice making social contacts and resolving social conflicts—skills that will aid them even in the job world (Perry, 2003). Psychologically, play is a time of stress relief (NAEYC, 1998). Physically, free play provides children the opportunity to engage in physical activity, which lessens the risk of obesity and related health problems (APA, 2003).

Recent Trends

Unfortunately, some elementary schools are being built without playgrounds, and recess is being replaced with organized activities such as computer classes and creative writing (Education Reporter, 2001). There are, however, ways to make a difference. Rebecca Lamphere is a mother in Virginia who took up the concern of eliminated recess. After battling for two years, she was finally successful in convincing her child’s school to reinstate recess as part of the
school day (Education Reporter, 2001). The Muncie Community School Board also responded to the persistent actions of Teresa Evanko Billelo and a group of motivated parents who wanted their children to have more than 8.5 minutes of recess. At a recent board meeting, the decision was announced to lengthen the amount of daily recess to 25 minutes (Boyd, 2004).

Conclusion

More research is needed to study the impact that play has on children in school settings because many schools find themselves questioning the true value of play in the midst of increasing academic standards and safety concerns. This study represents an overview of the issues surrounding play or recess time in the elementary school setting from the people closest to the issue: teachers, administrators, and students. One first-grade teacher commented, "recess is important even though there are negatives." Another first-grade teacher believes that "play is a vital part of child development. It is essential to learning how to be a social human being."

David Elkind (2003) suggests that there is another key reason for children to have time for play; they are designed to play for pure enjoyment. This enjoyment also creates a bank of pleasant memories that last through adulthood (Elkind, 2003). Children need time to be children, even during the school day. They can only process so much academic material at a time and play creates an entirely different world of learning opportunities and friendships to be made.
Additional Graphs

Graph 4.3
Effects of Recess on Children's Behavior in Kindergarten
(6 Teachers Surveyed)

Graph 4.4
Effects of Recess on Children’s Behavior in 1st Grade
(12 Teachers Surveyed)
Graph 4.5
Effects of Recess on Children's Behavior in 2nd Grade
(9 Teachers Surveyed)

Graph 4.6
Effects of Recess on Children's Behavior in 3rd Grade
(5 Teachers Surveyed)
Graph 4.7
Effects of Recess on Children's Behavior in 4th Grade
(10 Teachers Surveyed)

Graph 4.8
Effects of Recess on Children's Behavior in 5th Grade
(13 Teachers Surveyed)
Graph 5.3
Effects of Play on Children's Behavior in School #1
(14 Teachers Surveyed)

Graph 5.4
Effects of Play on Children's Behavior in School #2
(6 Teachers Surveyed)
Graph 5.5
Effects of Play on Children’s Behavior in School #3
(7 Teachers Surveyed)

Graph 5.6
Effects of Play on Children’s Behavior in School #4
(4 Teachers Surveyed)
Graph 5.7
Effects of Play on Children’s Behavior in School #5
(2 Teachers Surveyed)

Graph 5.8
Effects of Play on Children’s Behavior in School #6
(3 Teachers Surveyed)
Graph 5.9
Effects of Play on Children's Behavior in School #7
(5 Teachers Surveyed)

Graph 5.10
Effects of Children's Behavior in School #8
(5 Teachers Surveyed)
Graph 5.11
Effects of Play on Children's Behavior in School #9
(3 Teachers Surveyed)

Graph 5.12
Effects of Play on Children's Behavior in School #10
(8 Teachers Surveyed)
APPENDIX

Field Research Materials
Research Survey for Administrators: Play and the Young Child

Please fill out this form and attach all returned teacher questionnaires by March 1, 2004.

1. In what school or school corporation do you work?

________________________________________

2. Would you prefer that information gathered from your school be kept anonymous? ___

3. Is there a mandated amount of time for recess in your corporation or building? ______
   If yes, please indicate the amount of time for each grade level.
   - Kindergarten ______
   - 1st Grade ______
   - 2nd Grade ______
   - 3rd Grade ______
   - 4th Grade ______
   - 5th Grade ______

4. What are some of the advantages you see in playtime/recess?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

5. What are some of the disadvantages you see in playtime/recess?

________________________________________________________________________

________________________________________________________________________

6. What impact do you feel play/recess has on behavior when students return to the classroom?

Extremely negative  Slightly negative  No impact  Slightly positive  Very positive
Research Survey for Teachers: Play and the Young Child
Please fill out and return to your school principal by March 1, 2004.

What grade do you teach? _______

How much playtime (recess) does your class receive on average per day?

5-10 min  10-20 min  21-30 min  31-40 min  41-50 min
1 hour  1-2 hours  2-3 hours  Other ______

Do children choose their own activities during this time?  Yes  No  Sometimes

If sometimes, please clarify:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

What restrictions are placed on children during playtime/recess?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

What are some of the advantages you see in playtime/recess?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

What are some of the disadvantages you see in playtime/recess?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

What impact do you feel play has on behavior when students return to the classroom?
Extremely negative  Slightly negative  No impact  Slightly positive  Very positive

Please include any additional information that you would like to share about play/recess.
Student Research Survey

1. Use the following list of school subjects to decide your favorites. Number each subject to show which you like the best. Write 1 next to your favorite part and 11 next to your least favorite.

_____ Art
_____ English
_____ Gym
_____ Lunch
_____ Math
_____ Music
_____ Reading
_____ Recess
_____ Science
_____ Social Studies
_____ Writing
2. Circle the amount of time you have for recess during school.

- 5 minutes
- 10 minutes
- 15 minutes
- 20 minutes
- 25 minutes
- 30 minutes
- 35 minutes
- 40 minutes
- 45 minutes
- 50 minutes
- 55 minutes
- 60 minutes

3. List 3 things you LIKE about recess.

- 
- 
- 

4. List 3 things you DO NOT LIKE about recess.

- 
- 
- 

5. Do you think that kids need to have recess at school?

   *Circle one:* Yes No
References:


Approaches to working outside violent play. (2003). *Young Children*, 58(3), 63.


