

## *The John Massengale Paper*

# LET THE KIDS PLAY: THE IMPACT OF CHAOS ON ACADEMIC SUCCESS

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### INTRODUCTION

Recess, defined as unstructured play, is a necessary break for children to reboot their brains, regulate their emotions, socialize with their peers, and enhance their motor skills. Over the past 40 years, this unstructured, outdoor break has been all but removed in the school day and replaced with longer school days focused on classroom content. The aim of this article is to present a stark contrast between the United States educational practices and those of another country, Finland, on how to be academically successful. This journey will highlight a successful elementary school intervention, the LiINK Project, which implements four 15-minute unstructured, outdoor recesses and a character lesson daily as part of the school year schedule. Next, challenges to implement such strategies will be discussed, including the problems with standardized testing. Curriculum shifts from the past to the present, the lack of focus on developmental needs of the child, and the benefits of recess and character skills will be addressed. Finally, research-based school strategies needed for whole child learning will be outlined. If we as a nation are going to develop healthier, more resilient children who become a sustainable adult population, the strategies outlined in this article are a good place to start.

Chaos. Ask a casual observer of an elementary playground and that is likely the first word that comes to mind. For a child, that chaos translates to creativity, innovation, spontaneity, and imagination. An unconfined recess environment affords children

opportunities to explore on their own terms and those terms are not limited to the physical world. Take one more look at that playground and you will notice one common thread among the children, they are happy and stress-free. You may see it as chaos, but to a child, it's a necessary break to reboot, generate new brain cells, and optimize their social, emotional, physical, and cognitive health.

### ***U.S. education goals – lacking focus on child needs***

As a nation, we have moved farther and farther away from what the child needs and focused more and more on what the adults want and expect from children. From the mid-1950s through the present, there has been a drastic decline in free play while there has been a sharp increase in depression, anxiety, suicide, and narcissism (Gray, 2017). Dr. Gray, a psychology scholar, states, "At the expense of play, the United States has placed significant pressure on students and teachers alike with a driven pursuit of standardized assessments and learning."

The combination of emotional instability and high stakes testing is leading to many more teacher challenges in the classroom and a recognition that the child/adolescent is struggling with less regard for self and others (Gray, 2017). It is clear this strategy to remove play from the school day and increase the focus on classroom content and assessments is not working to meet developmental whole child needs or academic success. Many American researchers have examined how top academically ranked countries have been successful in their schools.

### **The Finnish School Model**

Finland has been highlighted as one of the most successful educational models since 2010 due to the results posted every two years from the OECD's *Program for International Student Assessment (PISA)*. In 2011, as a physical activity researcher, I travelled to Helsinki, Finland to observe and discuss challenging educational issues we have in the U.S. with different Finnish educational cohorts, e.g., Finland's Secretary of Education, sport federation, and grades 1-12 principals, teachers, students, and parents. A distinguishing characteristic of Finland's educational goals focuses on the idea that children's best interests take precedence over competitive rankings. This belief or mindset is why the Finns have been highly successful over the past 40 years in not only turning around their own academic achievement, but also in surpassing most other countries in academic achievement rankings. Furthermore, they do so by maintaining very basic practices.

#### **Finland school practices**

Finland children rarely take assignments home and they focus more on a balance between academics and recess, crafts, the arts, music, drama, and physical education throughout the week. From the time children start school at 7 years of age, the teachers emphasize active play as part of the curriculum - not only as a content area (physical education), but also with 15 minute unstructured, outdoor breaks every hour throughout the school day. They believe this not only helps the students stay motivated and grasp different concepts, it also develops a healthy child through different forms of play. The end result: better test scores and more productive learning across the students.

Although the Finns believe that all children and adults should be physically active for two hours or more daily, they believe that physical activity or play is about more than health. It's about meeting the needs of the whole child. They do not believe providing outdoor play opportunities for the children should be determined by adults. They also believe the body knows what it needs and will meet the demands through different forms of play. As a result of my visit to Finland, the LiiNK Project® (Let's inspire innovation

'N Kids) was created to address the academic challenges U.S. teachers and children face today in K-12 schools through two basic concepts: recess (unstructured and outdoors) and character development.

#### **The LiiNK Project®**

The LiiNK Project launched as a pilot program in two Dallas-Fort Worth (DFW) area private schools about eight years ago to address some of the challenges through recess and character implementation. Since then, the program has spread across 50 Texas and Oklahoma public schools reaching over 25,000 children, predominantly in grades pre-K through grade 5. Some districts, especially in rural areas, have implemented LiiNK in pre-K through grade 8.

The project's goal has never waived: to structure learning/academics around meeting the needs of the whole child. The success of this program is based on its innovative approach of aligning the developmental needs of children with providing teacher and administrator training to shift the imbalance of content with other fundamental strategies. The project focuses on delivering a 15-minute character development curriculum lesson daily called Positive Action® and most importantly, implementing 15-minutes of unstructured, outdoor play four times daily.

#### **Character defined**

Character is the way someone thinks, behaves, and feels. Children need daily training to learn the foundational character skills of empathy (listen to and embrace what someone else is feeling), problem solving, communication (how to use their words to express what they want clearly), trust, honesty, respect, self-confidence, and self-esteem (Farmer et al., 2017). Taking a proactive, positive approach to develop these skills is needed in order to negotiate sharing on the playground, promote positive social/emotional interactions, and reach their full potential as children (Lewis et al., 2021). Research shows that effective "character education" curricula improves academics and reduces problem behaviors simultaneously (Kendziora & Osher, 2016). Not only

do character skills have far reaching benefits if delivered effectively, so does recess.

### ***Recess defined***

Recess can take on many identities based on the definition used. For many, the definition of recess can be as abstract as play itself. Others feel that recess should be unstructured and outdoors, but that physical activity needs to be at the root of the time scheduled. Others feel recess should be more structured, with specific instructions oriented towards physical activity to help children be more active. Depending on the definition used for play will determine the benefits children will exhibit.

The LiNK Project defines recess as unstructured, outdoor play where the experience is whatever the child wants it to be (Gray, 2017; Rhea, 2016). It should be 1) self-directed and self-controlled, 2) motivated by means more than the end, 3) is guided by mental rules, and 4) includes a strong element of imagination (Gray, 2017). The focus can take on many forms: exploration, physical activity, learning each other's languages, socializing, imagining, or just reflecting. The unique aspect of this definition is that physical activity is not the central role of play. There is no active play expectation. Oddly enough, in this play environment, more moderate to vigorous active play takes place than when structured recess is implemented or when less recess is offered daily (Farbo & Rhea, 2021; Farbo et al., 2020).

Although recess has been practiced in the United States for decades, it has been minimized in schools around the country today in order to focus on more content. The trend to reduce or eliminate recess in schools began in 2002 as a result of "No child left behind." This was not the intention of the bill, but had far reaching consequences since standardized tests became the way we assessed whether children could read, write, and do math. As many schools today try to add recess back into the school day, at least for the young children, they find many challenges facing them.

### ***Quantity vs Quality Education***

Recess and character skills should be fundamental strategies required in the schools, but both have difficulty gaining traction because federal

and state education officials feel the number of minutes in a classroom is a more productive experience for learning than the quality of the child experiences at play and in the classroom. These officials don't understand the powers of outdoor play (Gray, 2017; Yogman et al., 2018) and socialization through play to boost learning (Farmer et al., 2017; Lewis et al., 2021). They believe that more time in the desk is needed to meet district and state standards and pass standardized tests for all age levels. A state board of education's approach is to present a "quantity" daily schedule for academic success: 120 minutes of English/language arts, 90 minutes of math, 60 minutes of science, and 30 minutes of social studies rather than a "quality" schedule of content mixed with other necessary developmental child and adolescent requirements. There is no research showing that more minutes in the classroom and a longer school day without breaks throughout the day produces better learning. In fact, the research shows many more negative results: a rise in teacher and student burnout, higher high school dropout rates, increased chronic diseases, decreased emotional stability, and a lack of socialization skills (Morgan, 2017).

### ***Standardized Testing***

The underlying force preventing most school districts from shifting to developmentally appropriate quality practices children need such as recess breaks throughout the day and a character lesson daily is standardized testing. The United States' educational system is preoccupied with chasing a test score that is not developmentally appropriate for all children and has not shown that it measures what children know. The teacher and child continually feel pressure to perform on a test as the foundation of the school setting instead of developing a school foundation around the one mechanism that teaches children how to learn and be socially/emotionally responsible: regularly scheduled brain breaks in the form of unstructured, outdoor play.

Many types of assessments can be given over each school year for different purposes. State level standardized tests, benchmark testing, and content tests are used to determine academic success of students at each grade level. The purpose of content

tests is to determine content mastery. The purpose of benchmark testing is to identify students' academic strengths and weaknesses to guide future instruction and support success on other high stakes tests. The purpose of state standardized tests is to provide an objective, unbiased assessment of different content areas. It allows for comparisons to be made among schools in regards to student achievement, accountability for teachers, and has the ability to inform instruction for educators. Schools, on average, implement 12 district benchmark and state standardized tests a year, plus all of the content tests given in each subject area (Lazarin, 2014; Strauss, 2015). What is more unclear and very hard to measure effectively is how much time is spent on practicing for all of these tests throughout the year. Students in K-2 are tested three times as much on district exams as state exams, and high school students are tested twice as much on district exams as state exams (Lazarin, 2014; Strauss, 2015). Curriculum expectations have also shifted over the past few decades without considering the developmental appropriateness of those expectations.

### **Past and Present Curriculum Expectations**

If we take a look at the 1970s expectations vs today's expectations, this is what we would see (Ames & Francis, 1979; Whitely, 2011):

**Then:** Half-Day kindergarten was the norm, it was play-based, and did not include academic standards or assessments throughout the year. By the end of kindergarten, students should try to write or copy letters (Ames & Francis, 1979; Whitely, 2011). By the end of kindergarten, students should be able to count as many as ten items and travel alone for four to eight blocks (Ames & Francis, 1979; Whitely, 2011).

**Now:** Full-Day kindergarten is the norm, it is academics-focused, and benchmark and standardized assessments are given throughout the year. By the end of kindergarten, students should "read emergent-reader texts with purpose and understanding" (Common Core, 2021). By the end of kindergarten, students should be able to count as many as twenty items (Common Core Standard, 2021).

**Then:** Pre-Kindergarten was day care.

**Now:** Pre-kindergarten is full-day, academics-focused on language arts, reading, math, science, social studies, physical education, and fine arts and includes benchmarks and assessments throughout the year.

At some point over the past 40 years, kindergarten became pre-Kindergarten, first grade became kindergarten, second grade became first grade and so on (Scholastic Teacher, 2021). We have removed the teacher's ability to assess developmentally appropriate tasks and have focused predominantly on content for which children are not ready. Instead of asking why we are teaching to a test that is not developmentally appropriate and hasn't shown productive results reflective of what children should know in elementary school grades, politicians and state/federal education officials want to know where the results are to show that a model like LiINK works. LiINK has been a research based project focused on whole child and teacher data for the past eight years. The results across rural, urban, and suburban elementary and middle schools have shown consistent results:

- 1) Classroom behaviors (Rhea & Rivchun, 2018; Rhea et al., 2016), attentional focus (Lund et al., 2017; Rhea & Bauml, 2018), and happiness (Clark & Rhea, 2017) significantly improve in the first year of implementation and continue to improve as they advance each school year;
- 2) Social and emotional development is greatly improved as measured by improved empathy, less anxiety/distress, improved happiness with oneself, resiliency, true self-esteem (belief in oneself even when challenged), verbal and non-verbal communication with others, learning each other's languages, and appreciation of nature/outdoors, risky play, and learning (Clark & Rhea, 2017; Rhea & Bauml, 2018);
- 3) Decision making skills, critical thinking, creativity, and problem solving are improved (Bauml et al., 2020);
- 4) Improved physical and health related development, especially healthy body fat percentages, agility, coordination, balance, strength, and overall strong bodies are seen

in the children (Farbo & Rhea, 2021; Farbo et al. 2020; Rhea, 2016);

- 5) The teacher and administrator training is effective. Teachers continue to verbalize that they can shift their thinking and behaviors to embrace the outdoors and the cognitive, emotional, and physical benefits for themselves and their students (Bauml et al., 2020).

### ***Research support for LiiNK whole child strategies***

In order to show the continual success of a program like this, LiiNK begins in grades pre-K through grade 1 in the first year of implementation and then adds the next grade level each year after that. Why roll it out this way? When collecting results, the goal is to report the outcomes of the intervention. Older children may not have similar outcomes of the intervention that the younger children have due to less focus on recess for their prior years in school. If the results are less impactful for the older children, education leaders will decide that the intervention is good for young children, but shouldn't continue for older children. That would be a mistake, since the LiiNK results now show 4<sup>th</sup> and 5<sup>th</sup> graders who have had unstructured, outdoor play throughout the school day for the last 3-4 years are happier, more emotionally well-adjusted, more empathetic, are less overweight and obese, are more physically active without requirements to do so, and are not losing ground on content scores compared to children who don't get these unstructured, outdoor play breaks daily and character skills to help them learn more about themselves and each other.

State and local leaders want to know how this type of program can gain back the time missing from the state content minutes required. The assumption is that children and teachers are intentional and focused on the number of minutes required every day throughout the day without recess, specials (physical education, music, and art), and time to socialize. We found prior to the start of LiiNK that teachers were spending approximately two hours daily on redirecting their students to focus in the classroom. The students were also more aggressive in the classroom and on the playground than in years past. Teachers may be able to cover material daily for the

number of required minutes, but it doesn't mean the students are connecting with the material.

Resting the mind is extremely important for productivity and the ability to focus. Teachers need regular breaks just as children do. Children will end up being more productive and creative in their work (Levitin, 2021), just as teachers will be more productive and less stressed in their daily interactions with their students. When a child's brain is fatigued and the child is not given time to go outside and release energy, play, and socialize, the brain will naturally take a break by daydreaming, fidgeting, getting up and moving around the room, or causing distractions with others (Levitin, 2021; Rhea & Rivchun, 2018; Rhea et al., 2016). Outdoor play (recess) allows the brain to refresh and release all those neural circuits that get all bound up when the child is fatigued. The experience of reading a book and suddenly realizing the eyes have moved several paragraphs ahead, but the mind hasn't retained any of the information, is the brain checking out for a break. When children have to sit through a long day with very few breaks, much of the research has shown very little learning is taking place due to brain fatigue (Levitin, 2021; Schwartz, 2014; Yogman et al., 2018). Instead of placing more importance on recess and free play time to relieve stress and promote brain energy, state mandates continue to force schools to emphasize in-class "learning" over a more nuanced view of how and why kids learn – recess or free play.

Levitin (2021), a neuroscientist who studies the brain and fatigue, has found children should not be overly scheduled, i.e., 2-2.5 hours at a time of multiple content activities prior to a break. He believes they should have blocks of time to promote spontaneity and creativity. Without that time, kids don't have the mental space to let new ideas and ways of doing things arise. Daydreaming and playing are crucial to develop the kind of creativity many say should be a focal point of a modern education system (Medina, 2014; Schwartz, 2014). For teachers and children, multi-tasking is used quite often to check off more tasks that have to be done during the school day. An example of multi-tasking for a teacher may be as simple as teaching children in the classroom while handing back assignments. Multi-tasking for a child could be doing an activity on the computer while

talking with a peer and listening to music all at the same time. Research has shown multi-tasking increases the production of the stress hormone cortisol as well as the fight or flight hormone adrenaline which overstimulates the brain and causes mental fog or scrambled thinking (Greenberg et al., 2016; Levitin, 2021; Medina, 2014; Poldrack et al., 2006). There are also metabolic costs when asking the brain to shift attention from one activity to another. The prefrontal cortex and striatum burn up oxygenated glucose which is the same fuel they need to stay on task. We literally deplete the nutrients in our brain. This leads to compromises in both cognitive and physical performance. All of these brain compromises lead to aggressive and impulsive behaviors.

Children's brains need active, unstructured, outdoor time throughout the day to allow for increased oxygen and glucose to fuel the brain and continue building neurological highways where the retention of knowledge exists (Greenberg et al., 2016; Medina, 2014). The LiNK recess implementation shows that students and teachers are focused in the classroom and accomplish much more in a shorter period of time than they did prior to the schedule changes. The school day does not have to be extended to incorporate this type of model. What has to shift is the belief that a test score reflects what a child knows, that all children are developmentally at the same place by age, and that the classroom is the sole answer for learning. Allowing teachers to determine what their children need and focusing on meeting the developmental needs of the children would go a long way in changing student outcomes.

***Research based school strategies needed for whole child learning:***

1. Every school district should adopt a recess policy that includes at least four components: 1) recess should be offered at least twice daily for 15 minutes each – one in the morning and one in the afternoon; 2) recess should not be removed for tutoring or punishment; and 3) recess should be unstructured and outdoors; 4) electronic devices nor any other reading materials should be used during this time.

2. Recess should be included in instructional time requirements daily as mandated by state laws. Recess is where children learn how to learn, be creative, critically think, and problem solve. In fact, many experts argue the most important 21<sup>st</sup> century skills aren't related to specific technologies or subject matter (school content), but to creativity, imagination, problem solving, teamwork, optimism, patience, and the ability to experiment and take risks. These skills are acquired when kids tinker. Research shows that given 15 minutes of free play, four and five year olds will spend a third of this time engaged in spatial, mathematical, and architectural activities (Ferrara et al., 2016 ; Ness & Farenga, 2016). This type of play, especially with building things, helps children discover and develop key principles in math and geometry (Ness & Farenga, 2016). As a result of what they learn on the playground, this knowledge is transferred into the classroom through writing, math, and science skills (Ferrara et al., 2016).

3. Change the mindset of teaching to a test at the district level. With high-stakes testing impacting every decision teachers make, they are often forced to teach to the tests rather than to their students. The quality of the day is lost in practice tests throughout the year. How much more time could be used for actual skill development if the tests were removed from the curriculum objectives?

4. Introduce a strong character development curriculum that can be taught daily. It needs to focus on empathy, trust, respect, and a shift to internal locus of control over external locus of control. Internal locus of control is when the person makes things happen. External locus of control is when things happen to the person. The external control is more of a victim mindset whereas the internal control is much more of self-confident, self-driven mindset. The internal control mindset doesn't mean a person won't fail. It just means that when they do, they will get back up and try again. Children today have more of an externally driven motivation rather than intrinsically driven. Developing good character skills paired with unstructured, outdoor play can shift children back to driving their own destiny.

5. Intentional strategies are a must. An increase in recess will promote a much more responsible and focused child. The off-task behaviors will decrease by 20-30% when offered 30 minutes daily which means the children can come in and get back to work very quickly. Teachers need to tighten up their student expectations and realize they can teach in a more structured way in the classroom with at least two 15-minute breaks daily and remove the activities they truly don't need to be doing. Teachers have been using these activities that don't meet content standards over the past couple of decades to keep children on-task, so transitioning back to meaningful standards driven lessons without the fluff throughout the day will take some strategic planning.

Parents, teachers, and administrators have experienced first-hand the positive impact the additional recesses have had on their children. The quality of the school day needs to be the primary focus for learning. We must get back to basics, recognizing that we are not focused on developmental needs of children. Standardized tests are not a good representation of what children know. We can't approach education as a year by year journey, fighting to meet standardized requirements, but instead by having an end goal that is truly representing the child's best interests. Using the five strategies above is a good start to a quality education and healthy, productive, and resilient children.

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