



PHYSICAL LITERACY IN THE UNITED STATES

A MODEL, STRATEGIC PLAN, AND CALL TO ACTION





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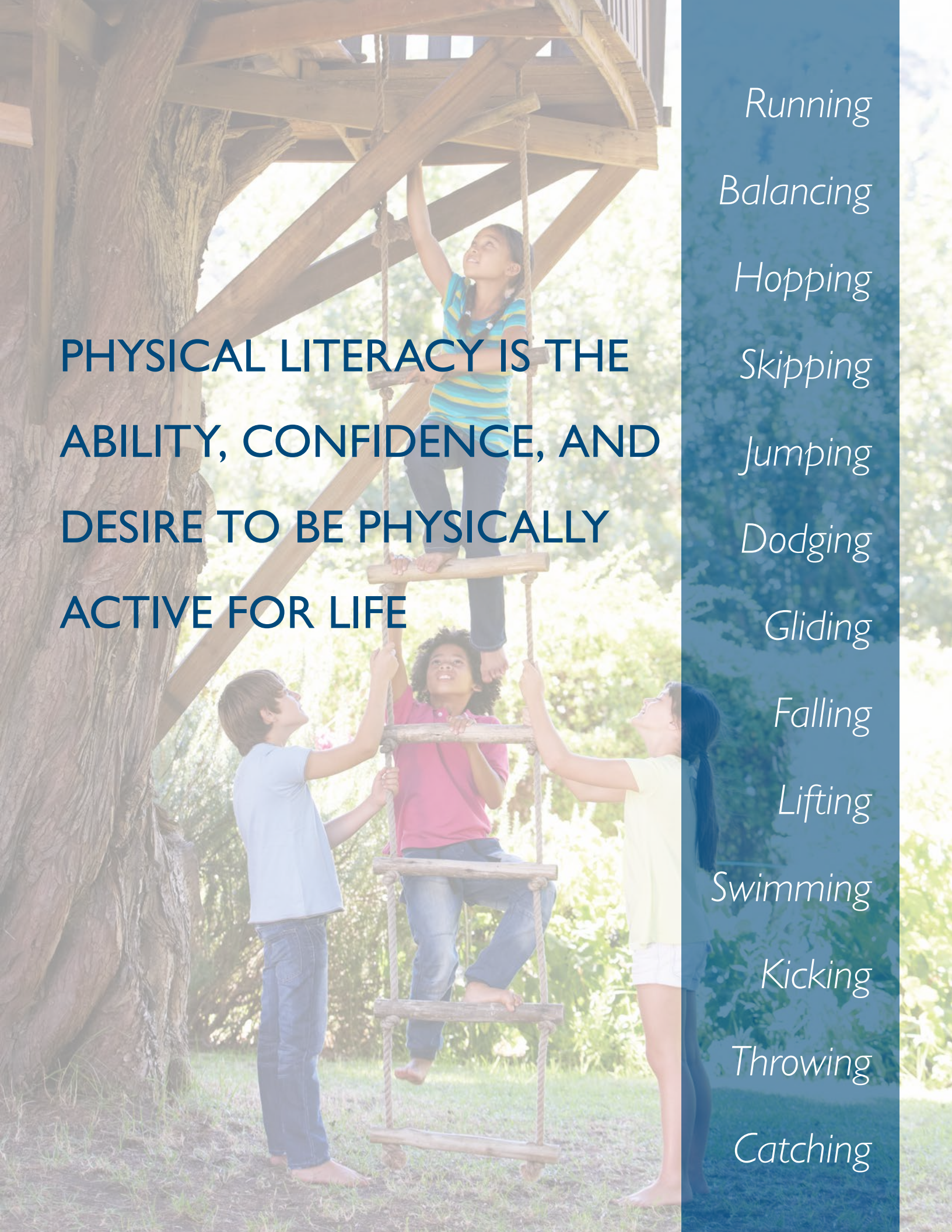
ABOUT SPORTS & SOCIETY

The mission of the Aspen Institute Sports & Society Program is to convene leaders, facilitate dialogue, and inspire solutions that help sports serve the public interest. The program provides a venue for thought leadership where knowledge can be deepened and breakthrough strategies explored on a range of issues. Project Play, a multi-stage initiative of the Sports & Society Program, aims to provide leaders with guidance and tools to build healthy communities through sports.

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A photograph of three children playing on a wooden treehouse structure. A girl in a blue and yellow striped shirt is climbing a rope ladder. A boy in a light blue shirt and a girl in a yellow shirt are standing on the ground, supporting the ladder. The scene is set outdoors with trees and a grassy area in the background.

**PHYSICAL LITERACY IS THE
ABILITY, CONFIDENCE, AND
DESIRE TO BE PHYSICALLY
ACTIVE FOR LIFE**

Running

Balancing

Hopping

Skipping

Jumping

Dodging

Gliding

Falling

Lifting

Swimming

Kicking

Throwing

Catching



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INTRODUCTION

Over the past decade, coalitions in about a dozen countries have introduced and embraced a variety of initiatives based on a desired outcome in individuals and populations called *physical literacy*. These collective efforts have been launched in response to a common problem in industrialized societies: declining rates of physical activity. Across the developed world, movement has been engineered out of daily life over the past generation, due in part to technological advances and institutions that have shifted resources to train workers for today's information-based economies.

The downstream consequences of creating sedentary lifestyles have only recently become apparent, and they are considerable. Research shows that physically inactive children are more likely to gain unhealthy amounts of weight, miss school, and perform worse academically. They're twice as likely to be obese as adults.¹ They'll earn less at work, have higher health care costs, and take extra sick days. Physical inactivity impairs quality of life, drains economies, and sets in motion a vicious cycle through role modeling; parents who are inactive are 5.8 times more likely to have inactive children.²

Aimed largely at young people, physical literacy programs seek to provide the movement skills and motivation to be active for life, though across nations there is variation in the definition of the term, the key components of the program, and the mechanisms of delivery. To date, there has also been a dearth of sustained efforts targeted at vulnerable populations—a gap that would need to be addressed in any successful physical literacy movement in the United States. Those with the lowest rates of physical activity and sports participation include children from low-income families, youth who are racial and ethnic minorities, girls, and children with physical or developmental disabilities.³

The Aspen Institute's Sports & Society Program introduced physical literacy as a promising concept worth considering at the program's April 2013 launch summit for Project Play, a multi-stage initiative to provide thought leaders with the tools

to build healthy communities through sports, the first phase of which focused on reimagining youth sports in a form that serves the needs of all children. There, a leader from the Canadian Sport 4 Life movement, Dean Kriellaars, exercise physiologist and associate professor at the University of Manitoba, presented on the promise of physical literacy, describing it as a strategy that has been embraced in Canada by many of the sectors that work with children, including sports. Many of the 80 high-level leaders at the summit, representing health, sport, education, and other stakeholder groups, were enthusiastic about the potential for a similar effort in the United States. In January 2015, the Sports & Society Program proposed in its report *Sport for All, Play for Life: A Playbook to Get Every Kid in the Game* that the development of physical literacy in all children sits at the base of the youth sport system as an aspirational goal and, more broadly, should be the foundation of how we socialize children through sports in all forms, from casual to organized recreational to competitive.

But the Sports & Society Program recognizes that sport is not the only venue to foster physical literacy—a process that starts in the home, when children are infants and begin to explore their world physically, as nature compels them to do. Additionally, sport is just one of many sectors that could benefit from a meaningful, society-wide embrace of physical literacy principles and programs that encourage children to continue their development in the face of cultural messages, passive entertainment options, and other impediments to physical activity. Among the sectors that could play a role and share in the rewards: public health & foundations, health care & medical providers, business & industry, policymakers & civic leaders, education, fitness organizations, community recreation, national sport organizations, even media & technology. Families have a significant role to play, too, as parents/guardians seek ways to provide their children with experiences that promote physical, mental, and emotional health.

The Aspen Institute, supported by the Robert Wood Johnson Foundation, created a 15-member working group comprised of leaders from across sectors to develop a strategic

plan for introducing physical literacy as a desired outcome for all children living in the United States. We engaged in a multistep process: 1) conduct an environmental scan of global efforts around physical literacy,⁴ 2) develop a definition for physical literacy that fits with the culture and needs of the United States, 3) identify goals and objectives for a successful movement, 4) engage additional leaders from key sectors whose participation will be necessary to successfully activate a physical literacy plan, and 5) lay the groundwork for broad adoption of physical literacy as a goal of stakeholder organizations.

HELPING CHILDREN MOVE BETTER, WITH SPECIAL FOCUS ON VULNERABLE POPULATIONS, WILL INCREASE PHYSICAL ACTIVITY ACROSS SOCIETY

This white paper conceptualizes a path forward, one we recognize is a journey that will require sustained commitment and coordination. As one of the Canadian leaders told our working group, it has taken nearly a decade of planning, communicating, and developing materials to turn their physical literacy movement into a “snowball rolling downhill.” That’s in a nation with one-tenth the population of the United States, and a political culture and set of resources that in some ways make it easier to introduce and adopt grand proposals. But the United States has its own unique assets, financial or otherwise—and a history of dynamic ideas taking hold when shaped and introduced effectively.

The need for a breakthrough strategy is clearly there: the Centers for Disease Control and Prevention (CDC) recommends that children ages six to 17 participate in one hour of physical activity daily, yet by the time they reach 6th grade, only 28.1 percent of girls and 41.4 percent of boys achieve this level of activity.⁵ Between the ages of nine and 15, youth in the US participate in 38 fewer minutes of moderate-to-vigorous physical activity each year, accounting for a 75 percent decrease.⁶

More than one-third of youth are overweight or obese, and obese youth have lesser coordination and “poorer performances in tasks requiring movement or projection of the body through space,” which is likely a barrier to being active.⁷ Obesity, among youth and adults, leads to the development of diabetes at higher rates.⁸ Physical inactivity and obesity are also risk factors for cancer, heart disease, stroke, joint and bone disease, and depression. By 2030, the combined medical costs associated with treating preventable, obesity-related diseases alone could increase by up to \$66 billion per year, with a loss in economic productivity of up to \$580 billion annually.⁹ The underserved are at greatest risk (see page 5).

TOOLS FOR AN ACTIVE LIFE

If you can...

RUN



BALANCE



SWIM

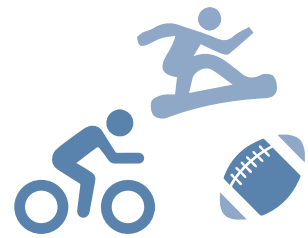


You can enjoy...

Playing tag
Soccer
Basketball
Lacrosse
Ultimate Frisbee
Triathlon
Tennis



Gymnastics
Biking
Softball
Football
Snowboarding
Zumba
Yoga



Swimming
Snorkeling
Kayaking
Water polo
Surfing
Diving
Rowing



Physical literacy programs have not been around long enough to produce longitudinal studies evaluating their effectiveness. But research has established that children with better-developed motor skills are more physically active as early as the preschool years,¹⁰ that motor coordination is a significant predictor of physical activity during the grade school years,¹¹ and that youth who are physically active are more likely to stay active through adolescence¹² and into adulthood.¹³ Indeed, support for the theory behind physical literacy has only grown since 1986 when Michigan State University researchers concluded, “The available evidence suggests that the quality of motor development in early life may have a significant impact on the quality of

POPULATIONS IN GREATEST NEED

AFRICAN AMERICAN AND HISPANIC YOUTH

Members of these groups are the least likely to be physically active and the most likely to be active a minimum of 60 minutes just one day per week or less.¹⁴ African American youth are less active than Hispanic youth, who are less active than white youth.¹⁵

GIRLS

Across all races and ethnicities, girls are less likely to be active than boys.¹⁶ The gender gap emerges by age nine.¹⁷ Among girls, African Americans and Asian Americans are most sedentary, with 49.5 percent and 44.1 percent of them, respectively, engaging in physical activity no more than two times a week (followed by Hispanic girls at 41.6 percent and white girls at 37.2 percent).¹⁸ Girls' lower levels of physical activity may be due to lacking athletic skills and confidence in ability, both of which are prerequisites for taking advantage of sports opportunities that have emerged since Title IX's passage in the early 1970s.¹⁹

AMERICAN INDIAN AND ALASKA NATIVE YOUTH

The federal government does not measure the physical activity levels of these groups, but a 2003 study found that 85 percent of youth from the Anishinaabe Nation (ages five to 18) did not meet the standards set forth in the Presidential Fitness Test, a health-related test that measures flexibility, aerobic endurance, agility and strength, abdominal strength, and upper-body strength. Moreover, 63 percent of the participants in the study were at risk for being overweight or were currently overweight, which was two to three times the estimate for the general population.²⁰ In fact, at 21 percent, American Indian and Alaska Native youth have the highest obesity rates among youth, occurring as young as two to four

years old.²¹ As adults, rates of diabetes among Native Americans are 177 percent higher than the rest of the US population.²²

CHILDREN WITH PHYSICAL AND DEVELOPMENTAL DISABILITIES

Youth with disabilities are 4.5 times less active than other youth.²³ Another study found that one-third of youth with disabilities do not fully participate in recess activities, two-thirds do not fully participate in playground games, and more than half don't participate in any organized school sport.²⁴ Obesity rates among youth with disabilities are 38 percent higher than for children without disabilities,²⁵ with youth who are on the autism spectrum or who have Down syndrome among the most at risk, at nearly two to three times the rate of youth without disabilities.²⁶ African American and Hispanic children with disabilities also have disproportionately high obesity rates as compared to white youth with disabilities.²⁷

LOW-INCOME FAMILIES

Broadly defined to include both organized and casual play, sport participation among youth living in households with the lowest incomes (\$25,000 or less) is about half that of youth from wealthier homes (\$100,000 or more): 16 percent versus 30 percent.²⁸

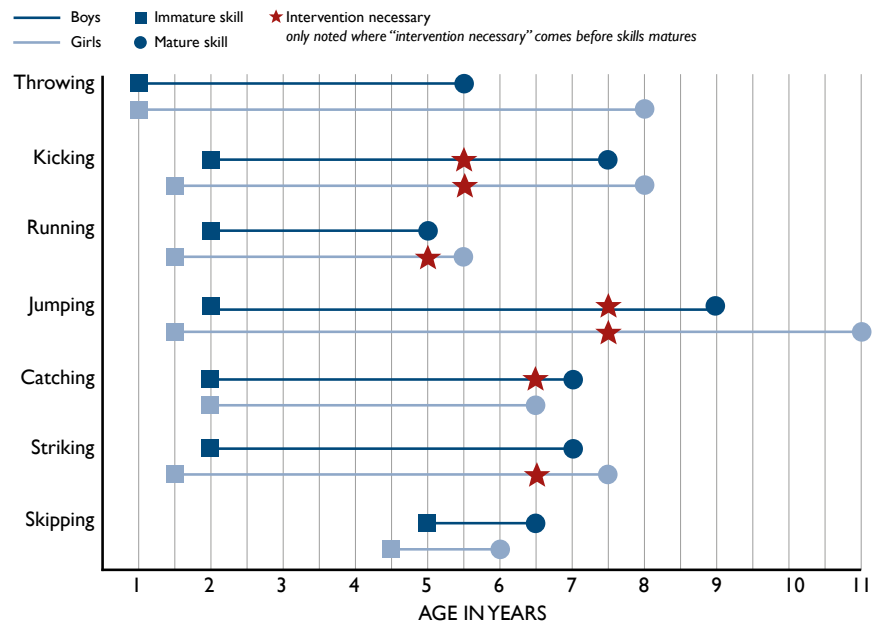
YOUTH IN THE SOUTH

They are more likely than those living elsewhere in the United States to not be physically active for at least 60 minutes once per week. In fact, of the 18 states that report middle school data, the two with the highest rates of inactivity are South Carolina and Georgia. At the high school level, 11 southern states have among the lowest levels of activity.²⁹

life experienced in later years.³⁰ In this way, physical literacy is the gateway to an active lifestyle, as Kriellaars has noted.³¹

Physical literacy requires the development of more than motor skills—it’s also a matter of developing the mindset to use those skills. Yet, many are late in acquiring the fundamental movement skills that allow them to feel good about their competence to engage in sports and other activities. See the chart below, based on research that identifies the age at which 60 percent of children were able to demonstrate proficiency in several basic movement skills;³² the chart also notes the age at which experts say children require an “intervention,” or teaching effort, to help them develop a skill.³³

DEVELOPING PHYSICAL LITERACY: INTERVENTION POINTS



In catalyzing physical activity, not all fundamental movement skills are created equal. Running speed and agility, a high proficiency in the standing long jump, and visual motor skills have among the strongest correlations to physical activity.³⁴ One study of preschool-aged youth found that having proficient locomotor skills (running, jumping, sliding, galloping, leaping, and hopping) was associated with increased time in MVPA and vigorous physical activity (VPA), while proficiency in object control (throwing, catching, rolling, kicking, striking, and dribbling) did not affect time spent in MVPA or VPA.³⁵ Supporting the value of locomotor skills was another study that found that young men who are physically active in their twenties had better motor fitness scores (600-yard run, sit-ups, 50-yard dash, and shuttle run) as youths and teens than inactive young adults.³⁶ Still other data recognize the role of physical literacy skills (including running, vertical jumping, catching, overhand throwing, forehand striking, and kicking) in fostering engagement in or-

ganized sports.³⁷ Despite the variability in existing research, it is clear that “more skilled children and youth tend to be more active,” as Robert Malina, professor emeritus at the University of Texas at Austin, concluded following an analysis of the available data.³⁸

RESEARCH HAS ESTABLISHED THAT
CHILDREN WITH BETTER-
DEVELOPED MOTOR SKILLS ARE
MORE PHYSICALLY ACTIVE AS EARLY
AS THE PRESCHOOL YEARS

Given the available data, Malina and other experts hypothesize that enhancing movement proficiency among children in general, and at the same time reducing or eliminating deficits among children in underserved populations, would increase levels of physical activity across society.³⁹ **A commitment to developing physical literacy in all children holds the promise of helping them understand what it is like to have a body that can do the things they want—run, jump, hop, skip, throw, catch, and kick, among other movements—that allow engagement in activities that are fun, healthful, and build community.**⁴⁰

On the following pages is an assessment of what it would take to catalyze a movement around physical literacy in the United States, starting with a definition of the term as conceived by our Aspen Institute working group.



THE DEFINITION

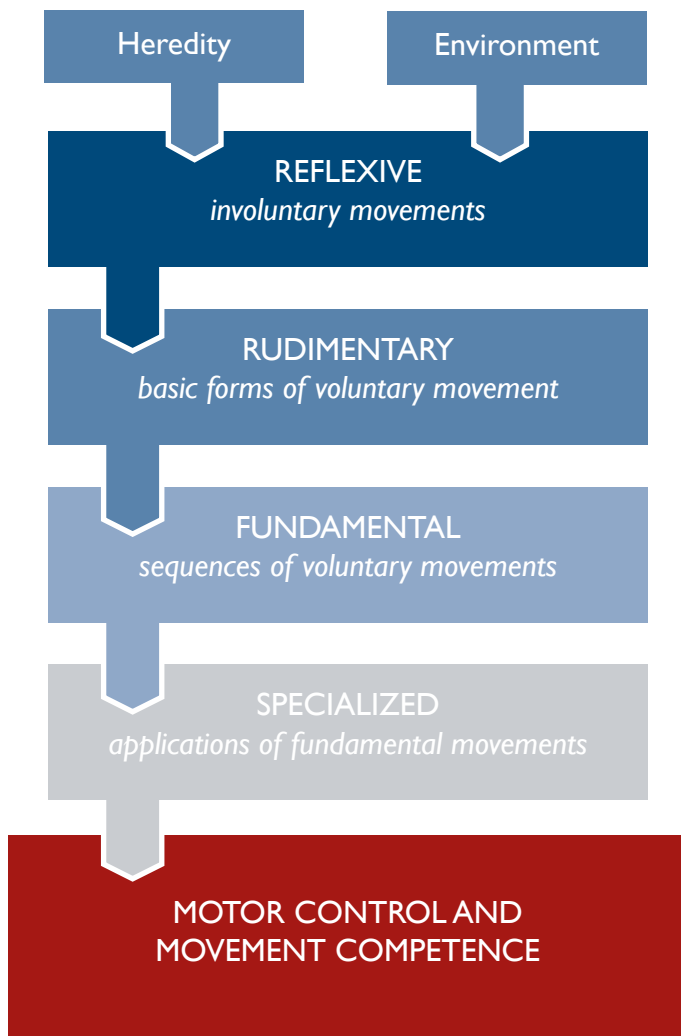
Before offering a definition, it's worth taking a step back and recognizing that nature dictates the shape of physical literacy when allowed to unfold without disabilities or environmental impediments. Even before birth, a child begins to move. They are programmed to do so. It is a biological imperative tied to the survival instinct and essential to human development. As newborns and infants, milestones begin to unfold, joyfully documented by parents/guardians: the first time they roll over, the first time they sit unsupported, the first time they crawl, the first time they pull themselves up, the first time they stand on their own, and eventually—the greatest accomplishment to date—the first steps. All the while, infants play, with objects and people.

As they get older, children develop, combine, and begin to master movement skills. They make obstacle courses with everyday objects and pretend that curbs are balance beams. They kick rocks, throw pine cones or balls, jump over imaginary lava, hang on countertops and on adults, try to stand on the school bus while it moves, slide across the floor in socks, jump while in sleeping bags or pillow cases, climb trees, skip across parking lots, and draw hopscotch boxes in the driveway or street. They make up games, with brooms as hockey sticks or using other everyday items. They initiate pillow fights, race on the playground, play tag, and challenge friends in cartwheel and handstand competitions. These activities provide the foundational skills for more structured forms of play, in organized sports or otherwise, which in turn, if designed with the health needs of children in mind, can make their own contribution to the development of physical literacy.



Researchers recognize four phases of motor development. The model below describes how each phase builds on the other, starting with reflexive movements. As children move into the third phase, focused on fundamental movements such as locomotion and object manipulation, environmental factors—access to activities—become more of a driving force than genetic influences in development and progression to the specialized movement phase.

STAGES OF MOTOR DEVELOPMENT



The model is valuable from a neurological and physical perspective, though it does not take into account motivational factors that can propel development. Thus the Aspen Institute encourages a cross-sector embrace of the following simple, useful definition:

Physical literacy is the ability, confidence, and desire to be physically active for life.

ABILITY refers to competency in basic movement skills and an overall fitness that allows individuals to engage in a variety of games and activities. This outcome is achieved through a mix of informal play and intentional teaching of movement skills,⁴¹ among them running, balancing, hopping, skipping, jumping, dodging, gliding, falling, lifting, swimming, kicking, throwing and a range of skills that require general hand-eye coordination.

CONFIDENCE is knowing that you have the ability to play sports or enjoy other physical activities. It is the result of programs and venues that are inclusive of people with differing abilities, and the support and encouragement from parents, guardians, coaches, administrators, teammates, and peers throughout the development process.

DESIRE is the intrinsic enthusiasm for physical activity, whether in organized or unstructured formats, in traditional or alternative sport. This result is achieved through early positive experiences that are fun and motivate children to do their best.

A review of other countries’ definitions of physical literacy shows that while variations exist, most agree that the above components build upon one another to give individuals the foundation to be active for life, assuming there are quality opportunities available for individuals to engage in activity and recreation. The academic research agrees, supporting the idea that the development of basic movement patterns in young children and the transition to more complex skills among older children are partially dependent upon early

experiences, opportunities to engage in new movement experiences, and the quality of early instruction and practice.⁴²

The definition is the backbone of this plan and is critical to the success of any collective effort. It provides a common language for all stakeholders and creates a standard by which an effort to increase physical literacy can be measured as tools are developed. As such, all stakeholders—from schools to sports, policymakers to community-benefit organizations, businesses to health professionals—are encouraged to adopt consistent language. Doing so will foster the pursuit of a shared agenda, one of the conditions essential to collective impact as described in the *Stanford Social Innovation Review*.⁴³

Using the same definition and verbiage will also help avoid potential confusion with other terms used in this space, including *physical education*, a school-based program that aims to develop physically literate individuals; and *health literacy*, which is unrelated to physical activity and the federal government defines as “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.”⁴⁴



GOAL & PRIMARY OBJECTIVE FOR THE UNITED STATES

PLAY = Physical Literacy in All Youth

The goal is to create the conditions for all youth in the United States to be physically literate by the middle school years,⁴⁵ thus encouraging habits of health and fitness for life. Generally speaking, that means age 12, though children develop physically and cognitively at varying rates, so the age should be treated as merely a guideline to organize institutional efforts to help children meet physical literacy milestones. We also recognize the pursuit of physical literacy does not end at age 12, and it should be developed beyond that age; programs and venues should support that opportunity so everyone in the United States can be active for life. (Note: A future working group would be wise to address how to develop and maintain physical literacy in teens, adults, and seniors.)

Developing physical literacy in youth provides our greatest opportunity, however, as suggested by the environmental scan of other nations. In a review of 10 countries for the Aspen Institute Sports & Society Program, J.O. Spengler, chair of our Sport and Physical Activity Research Collaborative, found that all had a focus on children. For instance, several programs in England recognize the significance of reaching kids at this critical stage in life. One, Bupa Start to Move, trains PE teachers for four- to seven-year-olds in techniques that help them teach the fundamental movement skills that create competent, confident movers.⁴⁶

Research also shows that it is important to reach children before age 12. As Avery D. Faigenbaum and Wayne L. Westcott write in the *ACE Youth Fitness Manual*:

The eventual decline and disinterest in physical activity appears to begin early in life in sedentary boys and girls. Children who are not exposed to an environment with opportunities to enhance muscular strength and [fundamental movement skills] such as catching, kicking, jumping, and balancing appear less willing to participate in games, sports, and free-play activities. By middle child-

hood, children more accurately compare their physical prowess to others and their perception of competence can influence their persistence in games in activities.

Some 10-year-olds already know that they are not as good as their peers, and, consequently, they choose to be sedentary rather than display low levels of motor-skill competence in front of their family and friends.⁴⁷

Understanding the physical development of children is key. For most, the body develops in dramatic ways during early childhood, plateauing in middle-childhood and then maturing rapidly again between the ages of 10 and 12.⁴⁸ So, age-appropriate standards should be implemented for each grade level. It's also important to recognize that each child develops on their own timeline, so becoming physically literate is less about achieving a certain status relative to one's peers and more about starting early and continually progressing toward benchmarks tied to personal development. Indeed, Canada has established different training stages for boys and girls in its long-term athlete development model, an initiative inclusive of physical literacy, since their bodies mature at different ages. Teaching physical literacy is a process best targeted to sex and age ranges, while recognizing that girls and boys develop at different rates, even among their same-sex peers.

None of the countries surveyed have set goals that specify the level of proficiency in physical literacy that it aims to achieve at given ages within in the population. Instead, the most motivated countries have focused on institutional actions designed to propel scalable change. A leading example: the government of Wales has deemed physical literacy to be as important to the development of schoolchildren as numeracy and literacy, and a recent task force recommended that physical education be a core subject in school curriculum, a powerful statement that recognizes the benefits of physical activity (see page 24).

As an aspirational goal for the United States, organizations that directly touch the lives of children are encouraged to commit by the end of 2016 to integrating physical literacy principles in their programs. They are encouraged to design those frameworks and teachings by 2018 and have them fully implemented by 2020. These organizations include but are not limited to: schools, day-care centers, sport programs, before- and after-school activities, scouting and youth leadership organizations, community centers, and youth-mentoring programs. All sectors can play support roles, as discussed in the next section. One of the most important needs will be indexing the rate of physical literacy. By 2020, as these programs come alive, stakeholders should benchmark the rates, then set incremental goals for how to reach all youth by 2030—with targeted strategies to reach our most vulnerable populations.

At the core of the effort must be a commitment to reach underserved youth. The statistics cited on page 5 only begin to highlight the need for a strategy based on targeted universalism, meaning a holistic plan that serves all with special efforts to close specific existing gaps. Not only are youth who are racial minorities more likely to be physically inactive than their white counterparts,⁴⁹ they have fewer options to become active. A study by the USA Swimming Foundation and the University of Memphis found that 70 percent of African American children and 60 percent of Hispanic children do not know how to swim. This deficit in swimming—one of the skills essential to physical literacy—also leads to drowning rates that are higher than that of white youth.⁵⁰ In fact, white youth have the lowest rates of drowning, while American Indian and Alaska Native youth have the highest.⁵¹ Further, most neighborhoods that are predominantly African American (71 percent) or Hispanic (81 percent) do not have access to a recreational facility, while a majority of predominantly white areas do (38 percent lack access).⁵² This is especially significant, given the research that people who live within one mile of a park are four times more likely to visit the park once per week or more, compared to those living farther away.⁵³

Some of the best opportunities for impact exist at after-school programs that serve low-income kids. In a 2014 analysis of obesity prevention strategies published in the *American Journal of Preventive Medicine*, programs that incorporate physical activity were found to hold the most promise in reducing the weight of six- to 12-year-old children through 2032, moreso even than shifts in food-related policies.⁵⁴ Several large, national after-school providers have already made commitments to add more physical activity to their programming.

For youth with disabilities, though, waiting until they are old enough to be enrolled in after-school programs may be too late. Data from Special Olympics programs indicate that the ages of two to five are critical; failure to engage youth with disabilities during this time may result in these individuals not making the

same kind of progress in learning fundamental motor skills, developing confidence in their abilities, and owning a sense of desire to be active.⁵⁵

Integrating physical literacy concepts into programs already serving America's underserved youth is key in reversing these trends, as is helping programs dedicated to physical literacy understand the barriers facing children from diverse backgrounds. Indeed, closing the gap between the physical activity rates of vulnerable populations and other children should be a primary objective, at the very top of the list of priorities of organizations that engage in this effort.



LEADING THE WAY

Canada has developed a curriculum that is applicable for youth with disabilities, and which could serve as a model for the United States. The *Canadian Paralympic Fundamentals Physical Literacy Resource* teaches the Active Start and FUNdamentals Stages of Long-Term Athletic Development, which also addresses physical literacy by teaching motor skills.⁵⁶ The resource includes theory, tips, and activities and lists specific adaptations suitable for children with mobility limitations and aids, visual and hearing impairments, and for those who are in wheelchairs.⁵⁷ Nearly 500 organizations in nine countries have registered to use the curriculum.⁵⁸

England has also developed programs specific to youth with disabilities. TOP Sportsability is a partnership between the Youth Sport Trust and the English national sport governing bodies that aims to bridge the divide between individuals with and without disabilities, while providing an introduction to a variety of physical activity and sport options.⁵⁹ The Aspen Institute's global scan reveals that reaching youth with disabilities was the most common type of outreach to marginalized communities, though Wales successfully implemented a program that targets young people, 16 and older, who are homeless or otherwise "socially excluded."⁶⁰



KEY SECTORS: ROLES & OPPORTUNITIES

It often takes a community to develop someone who is literate in a skill like reading. Developing physical literacy is no different. Our work identified 10 sectors that are well positioned to play key roles in advancing physical literacy (PL). Those sectors are: community recreation organizations, education, fitness organizations, national sport organizations, health care & medical providers, public health agencies & foundations, media & technology, business & industry, parents/guardians, and policymakers & civic leaders. On the following pages is a discussion of why each should engage, ideas for how they could engage meaningfully, and barriers or competing interests that could limit engagement.

With each of the sectors below, it will be important to identify individuals and/or organizations that will commit to being early adopters of PL principles. As champions, they can help educate and recruit others by speaking at conferences, engaging on social media platforms, authoring blog posts or op-eds, and introducing the idea to their networks in informal ways. This is one of the first steps to building a national physical literacy movement.

LEADING THE WAY

The Utah Olympic Legacy Foundation, created after the 2002 Winter Olympic Games in Salt Lake City, is a pioneer in PL programming at the local level. In 2006, the organization created coach curriculum plans for a variety of winter sports, from hockey to Nordic skiing. The curricula rely on physical literacy best practices. For example, to support skaters (applicable to ice hockey, figure skating, and speed skating), the Utah Olympic Oval instructors teach agility, balance, and coordination skills through a six-session Learn to Skate program (which costs beginners \$45 and includes all equipment). The formerly on-ice-only approach has been modified to include complementary land-based FUNdamentals Zone instruction that features balance beams, obstacle courses, and hula hoops to improve basic coordination and motor skills.

Since implementing these fun and engaging physical literacy principles in the program, participation has nearly quadrupled, growing from 400 participants in 2006 to 1,500 participants annually in 2014. Though the program targets youth ages five to 12, parents and siblings are encouraged to join in the sessions, creating a larger community and growing participation across all ages and abilities. The Utah Olympic Legacy Foundation has reached further into the Olympic Oval community to provide free FUNdamentals programs to two nearby local elementary schools as their regularly scheduled PE classes.



COMMUNITY RECREATION ORGANIZATIONS

WHY

- Community recreation organizations serve millions of youth. Through programming, they can set the foundation for physical literacy, which is especially important, given the recent cuts in physical education budgets.
- A child who lacks physical literacy may be more likely to drop out of or stay away from sports and recreation programs, limiting sign-ups. Conversely, enhanced physical literacy skills may increase participation in and demand for community recreation services.
- In the long term, more adults may register for programs as a downstream result of learning PL skills as youth.
- PL benefits communities by providing the necessary knowledge and skills to support lifelong physical activity beginning at the earliest stages of physical development.

IDEAS

Parks and Recreation

- Devote national resources at the national office level to developing a plug-and-play plan that local groups can easily implement.
- Include PL principles in the Certified Park and Recreation Professional curriculum.
- Host preconference workshops at state and national meetings.
- Make PL programming a prerequisite for accreditation for parks and recreation departments.
- Host a “physical literacy in action” day/festival to educate and engage the community.
- Install fitness stations and playground equipment that facilitate physical literacy, with signage that helps people to engage with the infrastructure.

Scouts

- Start each meeting with an activity that develops a physical literacy skill.
- Develop a patch for meeting PL standards.
- Partner younger troops with older troops to provide teen mentors.
- Make PL the basis of activities at summer camps and campouts.

Local Sport Clubs

- Grow the diversity of sports offered and create programs and pricing strategies that provide discounts for multi-sport play during the year.

All

- Train your leaders, administrators, and youth mentors in PL principles.
- Approach PL with the goal of reaching the hardest-to-reach youth, understanding that in doing so, you will reach all children.
- Recruit coaches and other role models from all demographics (e.g., gender, race, ability, body type, socioeconomic status, sexuality, etc.).
- Create a culture that values child development, not just scores and statistics.
- Educate parents/guardians about the benefits of physical literacy.
- Define programming by skill level, not age, and integrate youth with and without disabilities.
- Market the programs using inclusive language.
- Communicate with physical education teachers to connect students with community programs.

BARRIERS/COMPETING INTERESTS

Geographic Access

- In some climates, programming may be unavailable during seasons with extreme temperatures.

Spaces

- Some neighborhoods lack safe, nearby places to engage in PL-based activities.

Environmental Conditions

- Poor air quality in some areas means that outdoor activities don't always deliver positive net health benefits.

Resources

- Budgets of many providers are stretched thin.
- Funds may be necessary to recalibrate existing curricula or legacy programs, create new programs, and train administrators.



EDUCATION

WHY

- Active kids succeed. They come to school more often, demonstrate greater focus in the classroom, achieve better academically, and are more positively engaged with their peers and school communities.⁶⁴
- Brain scans show that kids have more neuro-electrical activity during the taking of tests after exercising.⁶⁵
- Physical literacy can be a tool to revitalize physical education. While daily PE has become less common, 93.6 percent of school districts still require these classes in elementary schools.⁶⁶ If delivered with quality and more regularity, PE has the potential to be an equalizer for kids, serving all demographics.

IDEAS

Preschools

- Incorporate PL concepts into everyday play and learning.
- Send home suggested play activities that encourage youth to engage with their parents/guardians through play.

Elementary Schools

- Promote PL as a key literacy for our youth to develop, alongside reading, math, and health, and commit to teaching it.
- Offer multiple daily recesses, and for kids who want more structure, optional physical activities during that time.
- Offer school-based, no-cut, co-ed intramural sports, with equal playing time.
- Offer alternative sports (e.g.: ultimate disc/Frisbee, even quidditch) or non-sport physical activities that tap into cultural interests.
- Address concerns about access by funding activities fully and offering late school buses to take home students.
- Teach PL through stretching and balancing activities in between classes.
- Incorporate physical activity into regular (non-PE) classes.
- Focus on development of fundamental motor skills, not just sport-specific skills, during physical education classes.
- Promote active transportation, such as walking, biking, skateboarding, or roller-skating to school.
- Communicate PL assessment results on students' report cards.
- Enlist the assistance of student committees.
- Educate school nurses on physical literacy, and include PL assessments in annual in-school health screenings.

Before- and After-School Programs

- Give providers plug-and-play curricula that use PL best practices and train them in how to integrate the curricula.
- Use PL best practices in programming.
- Devote time to free play, while being mindful that all kids, not just the best athletes, need to be included in activities.
- Provide early and/or late school buses to take kids to school and/or home, respectively.

Secondary Schools

- In addition to many of the ideas noted above, connect students with local volunteer activities that help develop PL in elementary school kids.

Colleges and Universities

- Infuse PL principles into courses for future teachers.
- Create a certificate or major in physical literacy.
- Integrate PL into curriculum for students pursuing degrees in public health, sport management, recreation, physical education, kinesiology, or human biology.

All

- Make physical education a core subject in school.
- At the state level, use the Society of Health and Physical Educators of America's National Standards & Grade-Level Outcomes as a guide to create PL standards for every grade level, then provide funding and accountability measures.
- For school districts, adapt school wellness and other policies to include PL principles.

BARRIERS/COMPETING INTERESTS

Test-Prepping

- Educators under pressure to improve standardized test scores of students often see physical activity as counterproductive to their mandate.

Bureaucracy

- Layers of approval common within public schools and related factors, including: funding, geographic access to programs and resources, limited class time, and many educational standards may make it difficult for a school to invest resources.

Resources

- It is harder to reach students who face disparities in education and health by race, gender, socioeconomic status, and cultural norms.



FITNESS ORGANIZATIONS

WHY

- The mission of fitness organizations (commercial facilities, equipment and clothing manufacturers, education and certification organizations, industrywide associations, etc.) is to help individuals achieve their best physical self.
- Physical literacy holds the prospect of growing future customers while expanding the variety of activities they can engage in.

IDEAS

Commercial Facilities

- Train staff who work with youth to identify problem areas and be ready to offer suggestions for solutions.
- Incentivize training of staff with continuing-education credits.
- Make PL the basis of programming for families.
- Distribute toolkits to members.
- Use PL-developing activities in day-care services where possible.
- Take gym classes for kids to schools and community centers.
- Offer complimentary PL assessments to children of adult members, the way facilities fitness assessments to new members.
- Reduce or eliminate mirrors and talk of body image.
- Use kid-friendly talk, imaginative scenarios, and music that matches the activity and participant level.
- Prioritize effort, not performance, and teach good form.

Sporting Good Companies

- Embrace PL in community outreach initiatives.
- Develop resources for at-risk communities.
- Companies with training apps can encourage mentoring by creating content for youth that shows young adults doing the activities with younger counterparts.⁶⁷
- Develop wearable technology products that capture PL movements and appeal to youth through a fun, online platform that allows them to track and share their progress.

Wholesale Manufacturers

- Train your sales staff in PL concepts.
- Include PL skills in the trainings you provide for corporations who buy your equipment.
- Offer pro deals to staff of commercial facilities that embrace PL principles.

Fitness Education and Certification Organizations

- Include PL in education and training for fitness professionals, newsletters to health and fitness professionals, websites, blogs, and social media.
- Develop training programs and progressions that professionals can implement with youth and translate to adult clients.

Industrywide Associations

- Educate your member organizations via webinars, and devote time at national conferences to the topic.
- Publish articles explaining PL and ways to help youth achieve PL milestones and develop toolkits.
- Create certifications.

All

- Increase education related to child development.

BARRIERS/COMPETING INTERESTS

Limited Resources

- Cost, time, and resistance to adding new material to trainings may all impede widespread adoption.

LEADING THE WAY

The Society of Health and Physical Educators of America (SHAPE America) holds an official organizational position that physical education is often the first introduction to learning motor skills and should be recognized as the foundation of an inclusive participation continuum over a lifespan. The largest organization of professionals involved in health, physical education, and physical activity, SHAPE America has adopted physical literacy in its literature, writing that “embracing physical literacy as an outcome will

not only align our goals with those of many other countries but will also help us to enhance physical education, physical activity, and sport programs throughout the country.”⁶⁸ Physical education develops physical competence so that all children can move efficiently, effectively, and safely and understand what they are doing. SHAPE America’s physical education standards have helped physical literacy gain notoriety as an essential basis for children’s full development and achievement.



NATIONAL SPORT ORGANIZATIONS

WHY

- Children are your future, whether as elite athletes or as consumers of your products—everything from merchandise to tickets. An emphasis on fostering PL in all children through age 12 holds the promise of growing the base, improving general athleticism, keeping kids engaged longer in sports, reducing injuries, and enhancing the quality of those athletes who emerge as teenagers and present themselves for development in specific sports.
- Parents are concerned about the state of youth sports, including the injury risks and the emphasis on winning at all costs at the expense of fun.⁶⁹ They want better for kids.

IDEAS

Sport-Specific Governing Bodies

- Support the adoption of the American Development Model (ADM) in each sport.
- Highlight the stories of Olympians, Paralympians, and other elite athletes who developed by playing a variety of sports.
- Hire diversity officers to develop efforts to engage underserved kids.

NCAA

- Use sports science research and communications assets to take a leadership role in helping an industry built around the chase for the athletic scholarship (youth coaches, camps, parents, facility managers, tournament hosts, sponsors, and kids) understand the downstream hazards of early sport specialization and of not prioritizing PL.

All

- Integrate PL principles into coach training modules that can be delivered at low or no cost, especially in underserved communities.
- Encourage kids to sample a variety of sports through at least age 12.
- Share your most experienced and qualified coaches with lower-level teams.
- Encourage youth to participate in free/unstructured play.
- Rewrite incentive structures for coaches and programs based on kids' growth in PL skills.

BARRIERS/COMPETING INTERESTS

Lack of Direct Local Control

- National governing bodies have mixed degrees of influence over local sport providers, who often are unaware of recommended best practices. The result is a focus on winning games at the expense of developing fundamental movement and even sport-specific skills.
- Some for-profit, membership-based, single-sport programs need kids in the program year-round so they can afford to keep paid coaches on staff.

Misinformation

- Many parents/guardians buy the notion that the route to athletic success is through single-sport play from an early age.

Lack of Qualified Coaches

- Most coaches are not trained in the key competencies to work with youth, but they need to be to introduce PL concepts into practices.

LEADING THE WAY

In Canada, the most successful efforts around physical literacy have been framed in the context of a long-term athlete development (LTAD) model. LTAD also has inspired the American Development Model (ADM), which some national governing bodies (the groups that oversee their respective sports in the United States) already embrace as

part of their grassroots sport participation efforts. USA Hockey has been the pioneer, making the development of physical literacy a chief goal in all children through age 12 under its version of ADM, which includes promoting multisport participation.



HEALTH CARE & MEDICAL PROVIDERS

WHY

- Physical literacy leads to improved health. Medical professionals have an obligation to engage with and the platform to communicate critical information to the public, building stronger relationships with patients, families, and communities.
- Physical literacy makes people resilient. It holds the prospect of decreasing health and health insurance costs by creating more active individuals who develop fewer chronic diseases.
- Emphasizing PL before sport-specific skills at an early age may also decrease overuse injuries, further cutting costs.

IDEAS

Health Insurance Companies and Government Health Care Plans

- Educate consumers about physical literacy.
- Integrate physical literacy principles into employer wellness programs.
- Recognize “exercise deficit disorder,” a formal diagnosis that would alert children, parents/guardians, and providers to a patient’s physical inactivity.
- Create a line item on the standard patient evaluation form.
- Be a peer-communicator to other insurance companies, benefiting all companies because of the rate at which people switch health plans.
- Allow health savings accounts (HSAs) to be used for physical literacy, physical activity, and sports programs that meet criteria.
- Use data from peer countries to support including wellness programs in mandated health care coverage until US-specific data is available.
- Implement accountability structures for payments by rewarding hospital systems for improving the health of their communities.
- Develop PL prescriptions.
- Offer reimbursement and other incentives to providers who discuss and measure PL with patients, and to families that enroll children in community recreation and sport programs certified in PL.

Medical Schools

- Embed PL concepts, standards, and assessment tools into higher-education curriculum (textbooks, certification exams, continuing-education credits, online platforms) for future health professionals (doctors, nurses, occupational therapists, physical therapists, physicians assistants, etc.).
- Include emphasis of PL in pediatric rotations and residency curricula.
- Integrate PL into teaching of normal childhood development and motor function milestones.

Medical Providers

- Assess gross motor development and PL skills at each well-child visit for infants, toddlers, school-age children, and adolescents.
- Include a question on intake forms to gauge a patient’s involvement in physical activity and reasons for not participating, if any.
- Encourage pediatricians and obstetricians to educate children and new parents/guardians on the importance of physical activity and PL.
- Use a holistic care model and have a designated physical literacy specialist on staff who can meet with children and guardians when necessary.
- Include PL assessments in the electronic medical record.

ALL

- Broaden the definition of health and wellness to include physical literacy as pivotal to a healthy lifestyle.

BARRIERS/COMPETING INTERESTS

Geography

- Access to care is shaped by where medicine is practiced. In rural areas, for instance, access can be especially limited.

Insurance

- Among insurance companies, fear of losing customers can prompt resistance to new concepts.
- Individuals changing health plans may not receive consistent benefits.

Knowledge

- Lack of education about PL can prevent insurance companies and providers from embracing the concept and programs.



PUBLIC HEALTH AGENCIES & FOUNDATIONS

WHY

- The outcomes of a physically illiterate society are a public health concern. PL has the potential to significantly improve to community health by affecting indicators for physical activity and other factors linked to chronic diseases and life expectancy.
- PL efforts can help local community health departments highlight simple, collaborative, and effective preventive-care efforts.

IDEAS

- Conduct or fund research that grows the body of evidence between PL and program design, PL and physical activity, and PL and health outcomes. Such research is the first step to establishing reimbursement by insurance companies. Use the research in consultation with sport leaders to develop plug-and-play curriculum, enabling local communities to implement research-based programming.
- Utilize community health promotion advocates in disadvantaged communities to provide a direct linkage between the health benefits of PL and the parents or caregivers responsible. The benefits of providing these advocates, like *promotoras* in Latino communities,⁶¹ are well-documented.
- Integrate PL assessments and education into standard community health clinic offerings like maternal and parenting classes.
- Incorporate PL principles in the curriculum and education of university public health programs and within professional membership associations.
- Encourage federal funding of PL research and use your knowledge of community health needs to guide priorities.
- Initiate cross-sector calls to action that can be led by the US Surgeon General and other prominent public health officials.

BARRIERS/COMPETING INTERESTS

Funding

- Other areas in domestic health, such as affordability and quality of care for a range of diseases, have more urgent, short-term timelines than PL. Officials are also more familiar with them.

Consumer Demand

- PL programs are currently not a priority of the consumer. This is especially true for low-income households and families, where basic, immediate necessities require most of the resources and available capacity.





MEDIA & TECHNOLOGY

WHY

- Young people spend nearly 7.5 hours in front of screens each day, almost 4.5 hours of that on television, yet the American Academy of Pediatrics (AAP) recommends that children and teens dedicate no more than two hours per day to screen time.⁶²
- Meaningful actions hold the prospect of addressing public concerns about the role of media and technology in fostering sedentary behavior, which may only grow as e-sports—video game competitions as spectator sport—and other forms of passive entertainment are developed and embraced by tech and media companies.
- Health marketing campaigns have worked. Media companies partnered with the CDC on the VERB campaign of public service announcements from 2002 to 2004, producing a dose-response effect that “significantly” increased physical activity among tweens.⁶³

IDEAS

Kid/Teen Networks

- In scripted dramas and other programming, show youth engaging in supportive activities.
- Create PSAs that highlight the problem or create that moment of prioritization, then drive them to a website that connects kids with local experiences or programs that facilitate the development of these skills and/or promote activities they can do at home during commercial breaks.

Sports Media

- Through storytelling, challenge the myth that suggests the best athletes focused on one sport before puberty at the exclusion of free play and other sport activities.
- Make the concept of physical literacy “cool” through the use of video clips featuring popular athletes and entertainers who can inspire youth to engage in activities that promote PL.

Social Media Companies

- Donate ad space to messaging that promotes PL.

Video Game Companies and Television Manufacturers

- Embed a software feature that alerts kids when they have hit the AAP’s recommended maximum of two hours of screen time per day, at which point they are encouraged to engage in activities that develop PL.
- Create an interactive game that teaches and measures PL through fun activities.

App Developers

- Partner with educators and video production firms to design an app with a library of video resources that can be used by teachers, coaches, parents, older siblings and others to integrate PL principles into existing activities.

All

- Create targeted strategies for each demographic and audience (parents, kids, schools, nonprofit organizations, etc.).
- Reach youth where they are, such as YouTube and social media.
- Develop Spanish equivalencies as well as English messaging that targets a variety of cultures.
- Create a platform that tracks kids’ progress in physical literacy and time in activity and that offers rewards for positive milestones.

BARRIERS/COMPETING INTERESTS

Business Model

- Screen-time media companies rely on screen-time consumption.

Lack of Access to Technology

- Some kids are too young to have mobile devices where they can be reached; others are from low-income homes and cannot afford them.

Costs of Messaging Showing Diversity

- It can take resources and creativity to create programming that reflects diversity and applies to those who aren’t already active.

Terminology

- In public messaging, media companies may resist using the academic-sounding phrase “literacy.”



BUSINESS & INDUSTRY

WHY

Employers

- In the short term, employees' dependents who are physically literate may have lower health care costs and may also be healthier, potentially resulting in lessened absenteeism due to caretaker responsibilities.
- In the long term, health care costs may be less because employees who developed physical literacy and habits of activity as youth will be more active and healthier as adults.

Food & Beverage Companies

- PL has the potential to increase physical activity, which helps individuals work off the calories they've consumed.

IDEAS

Employers

- Educate human resources departments on PL so they can promote PL through employee wellness incentive programs.
- Add incentives tied to engagement by employees' children in activities that foster PL.
- Offer PL-related volunteer opportunities for employees.
- Offer PL-inspired programming in employer-sponsored day-care centers.

Food & Beverage Companies

- Put PL challenges on the backs of cereal boxes, juice boxes, and other kid-consumed products.

All

- Support development of PL initiatives in sectors where funding is a limiting factor.

BARRIERS/COMPETING INTERESTS

Employers

- Lack of long-term scenario planning around health care costs by employers may make realizing the above ideas difficult.
- Companies may understand the need to promote physical activity among their employees, but may underappreciate the role that having physically active kids plays in that equation.
- Lack of coverage for dependents and for employees who work retail or shift-based jobs and are ineligible for health coverage offered by the employer mean that some of the above ideas may not reach the hardest-to-reach individuals.



PARENTS/GUARDIANS

WHY

- Parents/guardians bear the ultimate responsibility for helping their children achieve physical literacy. They often control which activities children participate in, especially after school hours, on weekends, and during the summer months. If parents/guardians demonstrate an understanding of PL activities and vocabulary, they can act as positive role models for children to reciprocate and develop skills of their own.

IDEAS

- Integrate PL concepts into your child's daily activities, and help them to develop PL outside of traditional sport environments.
- Champion PL and physical education in your child's school, and speak up when programs and environments don't promote the development of PL movement skills (or kids just aren't moving much at all because the leader prioritizes lectures and line drills).
- Promote unstructured play.
- Limit the amount of time that you carry or push young children in strollers so that they can be active in everyday settings and develop movement skills in a variety of environments.
- Emphasize the importance of engaging in a wide variety of sports or activities to prevent early specialization and associated stress.

BARRIERS/COMPETING INTERESTS

Time and Resources

- Parents/guardians are often working and may lack the time to support the physical activity or PL needs of their child. This is particularly true for single parents/guardians or parents/guardians who have multiple children.
- Families may lack transportation to get their children to after-school programs or parks/facilities.
- Some parents/guardians from lower socioeconomic backgrounds may not be able to afford equipment.
- Parents/guardians may not have access to good information about what quality participation opportunities look like.



POLICYMAKERS & CIVIC LEADERS

WHY

- Government has an interest in reducing health care costs, much of which it picks up.
- The introduction of PL principles into the education, health, and physical fitness fields can be aided greatly by guidance and leadership from elected officials and governmental agencies at the federal, state, and local levels. They can help create systemic changes in the ecosystem of government and nongovernment infrastructure needed to deliver PL programs to the broadest set of constituents and consumers.

IDEAS

- Assist in the development of tests that measure rates of PL among individuals and groups.
- Once measurements are solidified, track rates of PL in the Centers for Disease Control and Prevention's Youth Risk Behavior Survey, and extend that analysis to include data on elementary-school students.
- Include PL best practices as a requirement in PEP Grants and other federal grants with physical activity components.⁷⁰
- On the federal, state, and local levels, incentivize local PL community efforts that look to engage community sectors in a collaborative way.

BARRIERS/COMPETING INTERESTS

Leadership

- Lack of a government sports commission or other body that has resources to implement change and that can coordinate efforts at the national level makes it more difficult to have the kind of collaboration necessary for widespread adoption.

LEADING THE WAY

In the publication *Climbing Higher: The Welsh Assembly Government Strategy for Sport & Physical Activity*, the government of Wales articulates the need to “ensure that, in the process of personal development, the acquisition of physical literacy is as important as the development of literacy and numeracy skills.”⁷¹ To achieve this, the Physical Education School Sport initiative has implemented programs that prioritize the development of physical literacy. Additionally, the Sport Physical Activity Task Force has recently recommended that the Welsh government adopt a physical literacy framework for the country that would establish physical literacy as a priority of physical education courses in the schools. The recommendation suggests that physical literacy become the standard against which physical education courses are measured.⁷²



ADDITIONAL CONSIDERATIONS

THE NEED FOR NATIONAL LEADERSHIP

As with any social movement, groups and people need an entity to turn to when they have a question, feel moved to make a difference, want to learn more, or need materials. Enter: a backbone organization. Depending on its mission, that organization also could be responsible for fundraising, coordinating stakeholder efforts, pushing information into and capturing learnings from the grassroots, conducting research, developing tools and best practices, and supporting local groups. It could also convene, mentor, and develop leaders. A coordinated set of national standards may also prove to be beneficial, since youth in low-income communities are often transient. At the very least, such an organization would help to establish credibility for physical literacy.

Our working group's global scan underscored the importance of a domestic, go-to organization. In every country where a PL movement has taken hold, one group has emerged as a coordinating force. In most cases, it's been a sport body that leads the organizing efforts.⁷³ In Canada, it's a cadre of loosely organized, if like-minded academics and sport leaders that collaborate under the umbrella of Canadian Sport 4 Life.⁷⁴ They have created a library of materials to support leaders across Canada and increasingly across the globe. Elsewhere, including New Zealand, Northern Ireland, and Wales, the government assumes this role, typically by supporting the national sport organizations within their respective countries.⁷⁵

The countries with the most established initiatives (England, Canada, and Wales) have ministries of sport that help fund external organizations or offer support in developing and implementing their plans. The United States lacks an equivalent federal body to support sport development, so relying on government resources may not be the most viable option at present. It is worth noting that PL programs that focus on reaching lower-income and underserved groups are typically funded through the government's social spending, though even in the aforementioned countries, sustaining that funding has proven to be a challenge, suggesting that a new model of funding may be more effective.

In the United States, the leadership body could be an existing nonprofit or foundation that adopts physical literacy as one of its programs. This leadership group should look to build alignment among other existing organizations and their constituencies. One way to do this is for stakeholder organizations to adopt PL as part of their platforms and bodies of work.

Though it is hard to predict the funding needs at this stage in the process, capital will have to be raised to support the efforts of any such backbone or-

ganization. The funds pooled by the organization could then be distributed across communities to incentivize or seed valuable state or local efforts, with the objective of empowering champions and ambassadors to take the lead in their own communities.

ACTION STEPS

- **CONVENE LEADERS** to conceptualize the most effective backbone organization, as well as potential funding sources that can supply the necessary leadership and staffing, and support the creation of materials and toolkits. Consideration should also be given to additional phases for a PL effort that will address teens, young adults, and aging adults.
- **CREATE REGIONAL AND LOCAL HUBS** for advancing PL efforts, helping organizations to create their own resources that sync with the recommendations from the national group.
- **DEVELOP A ROBUST WEBSITE** that can host resources, and draft a communication plan to push information to target audiences.

DEVELOPMENT OF TOOLS & RESOURCES

Parents/guardians, health professionals, educators, coaches, and other stakeholders need evidence-based tools and resources to guide and support them in the delivery of PL programming. At least three categories of toolkits are necessary: one on how to develop PL in individuals, another on how to incorporate PL into existing programs, and a third on how to champion PL at the local level. Special attention should be given on how to reach and serve vulnerable populations. Additionally, since each organization in each community serves a distinct demographic, the tools should allow for a level of flexibility to successfully implement programming.

These tools and resources should be complemented by a communications plan that creates a sense of urgency among the parties that touch the lives of children. Other countries' successful campaigns have shown the need for messaging that is personalized by stakeholder group while also syncing

with larger, nationwide efforts.⁷⁶ An effort to educate parents/guardians about what is meant by the term “active” will likely need to be part of this messaging. In public-facing campaigns, messages that physical literacy can lead to youth performing better throughout life and in specific scenarios may hold more potential than listing the health benefits of being physically literate.

ACTION STEPS

- **ADAPT DOCUMENTS** that other countries have found successful. Make them easy to use and access, and offer them at low or no cost.
- **DEVELOP INFOGRAPHICS, ICONS, AND MESSAGING** materials for advocates to use to generate support. A video by Sport Wales (URL in footnotes) is a good example of a concise, powerful messaging effort.⁷⁷
- **BUILD A SPEAKERS' BUREAU** and identify experts who can provide hands-on consulting to groups.

IT'S NOT JUST ABOUT PARTICIPATION.
IT'S ABOUT WHAT'S HAPPENING WHEN
THEY'RE THERE.

MEASURING PHYSICAL LITERACY

It's hard to manage what one cannot measure. Recognizing as much, SHAPE America, the association that represents physical educators, has created a resource for its sector: the *National Standards & Grade-Level Outcomes for K-12 Physical Education*, a guiding document to help PE teachers understand competencies that students should exhibit at each grade level. We need to take the next step, as other countries have, to develop robust tools to measure whether those competencies have been achieved. With information about strengths and weaknesses in hand, parents/guardians, teachers, coaches, and others will be able to provide help youth become physically literate.

In measuring individuals, one option is to adapt Canada's seminal guide, *Developing Physical Literacy: A Guide for Parents of Children Ages 0-12*, and its companion tools, the Physical Literacy Assessment for Youth (PLAY) and Physical Literacy Observation Tool (PLOT).⁷⁸ The basic version of the PLAY tool is comprised of five groupings of tasks that cover the child's physical abilities (running, locomotor, object control-upper body, object control-lower body, and balance/stability/body control); with each task, the child gets graded on a four-point rubric (initial, emerging, competent, and proficient). At the advice of the Canadian leaders responsible for the document, the revised American version should include a way to also assess the social environment of the activities, how much fun youth are having, and the progress of youth with disabilities.

Any test needs competent assessors. Academics, health professionals, educators, coaches, and other individuals who work with youth should be trained in how to measure the physical literacy of program participants, patients, and students. Leaders should also be able to assess the progress youth make throughout their engagement in each program. In addition, a more basic assessment should be created for parents who are not trained in PL principles, but who can use the tool to grow and sharpen their awareness of their child's fundamental movement skills.

Finally, tools should be developed to assess the physical literacy skills taught through various sports and other activities. By developing ways to measure PL across activities and in individuals, consumer demand for programs that prioritize PL will grow, encouraging cross-sector investment.

ACTION STEPS

- **CREATE EASY-TO-USE TOOLKITS** that allow parents/guardians, teachers, coaches, health professionals, mentors, and others to measure kids' baseline PL levels and to track progress. Train youth development professionals and academics in how to measure PL. Have intervention steps available for post-assessment follow ups.
- **INCLUDE PL IN THE ELECTRONIC MEDICAL RECORD** and develop a system that allows for easy, anonymous aggregation of PL data, with a way to indicate demographics (gender, race, socioeconomic status, ability, zip code, etc.).
- **STUDY THE EFFECTS OF PL PROGRAMS** on underserved communities, specifically, and use this data to improve offerings.

GLOBAL COLLABORATION

As a nation, the United States has the benefit of learning from countries that have already embraced PL principles and frameworks. Likewise, our nation can add value to the global effort. The inaugural step in collaboration was the Aspen Institute Sports & Society Program's commissioning of the first-ever global environmental scan of physical literacy movements (available at PLreport.ProjectPlay.us).

Among the organizations consulted in the development of the environmental scan was the International Physical Literacy Association, which has established itself as the educational authority on physical literacy.⁷⁹ Its website and conferences provide resources, leadership, and collaborative opportunities that benefit a range of countries, all in different stages of developing PL in their youth.

Still, there is more that we can do to collaborate globally. Physical literacy is an issue that many countries are addressing, and the United States should look to grow with them. Ultimately, a collective, global effort validates the necessity for the work that we will undertake domestically.

ACTION STEPS

- **IDENTIFY OTHER KEY INTERNATIONAL STAKEHOLDERS** who could lead peer education in the United States. Host international PL leaders at events and conferences.
- **CONTRIBUTE TO THE GLOBAL CONVERSATION** by participating in conferences and authoring blog posts and articles.
- **ACT ON BEST PRACTICES** identified in the global scan.

LEADING THE WAY

Since 2011, the parks and recreation department in Stoughton, Wisc. has dedicated itself to being a physical literacy resource for community members. Notably, it has incorporated PL principles into its programming to alleviate troubling trends: decreasing participation in adult sport leagues, high obesity rates, absence of free play among children in the community, increasing number of private organizations in the youth sports market, and effects of the Great Recession. Today, under an initiative called Active Stoughton for Life, the parks and recreation department incorporates PL basics into every summer and winter sport it offers for children through age 12 (\$30 to \$40 for six to eight weeks, and fee waivers are available for any family in need). Every practice begins with a movement prep session. Stoughton also offers summer programming that provides the basics for a variety of sports via activities such as Intro to Hitting Games, Intro to Ball Games, and others. To effectively implement these changes, coach training increased in length from one hour to two days, and the department has turned to social media, newsletters, and other avenues to educate parents about physical literacy. It measures participants' competencies using Canada's Physical Literacy Assessment for Youth (PLAY) tools. The increased investment resulted in participants showing progress in basic movement skills in just three weeks of practice and high rates of retention.⁸⁰

CONCLUSION

No one has the right to be an amateur in the matter of physical training. It is a shame to grow old without seeing the beauty and strength of which the body is capable.

– SOCRATES

Research makes clear that moving our bodies at a young age on a regular basis can produce many benefits, from the educational to financial, physical to social, motivational to emotional. Societies that move, improve. But movement is dependent on having the ability, confidence, and desire to do so. That's where physical literacy comes in. It's a breakthrough strategy that holds enormous promise.

Stakeholders would be wise to adopt a goal of developing physical literacy in all youth by the middle school years. They should build the army of early adopters and make physical literacy a household concept. Make it a priority for community recreation organizations, education, fitness organizations, national sport organizations, health care & medical providers, public health agencies & foundations, media & technology, business & industry, parents/guardians, and policy-makers & civic leaders. Embed PL principles into existing programs, curricula, and certifications. Index the overall level of physical literacy in children, and set incremental goals for how to reach all youth by 2030, with targeted strategies to reach our most vulnerable populations. Activate on the sector ideas presented within this white paper. Commit to eliminating the gap in activity levels by race, gender, ability, geography, and socioeconomic status, and elevate all.

Creating a physically literate society is no small undertaking, but with collective action it is possible. It is also worth the effort. Empowering all youth with a foundation of physical literacy has the potential to create active and healthy lives, improve communities, and transform our country's social and economic future.

THAT'S A FUTURE WORTH BELIEVING IN.

ENDNOTES

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APPENDIX

FIGURE CITATIONS

TOOLS FOR AN ACTIVE LIFE

Inspired by Canadian Sport 4 Life.

DEVELOPING PHYSICAL LITERACY: INTERVENTION POINTS

Inspired by Seefeldt, Vern and Haubenstricker, J, “Patterns, Phases, or Stages,”³² and Higgs, Colin, *Developing Physical Literacy*.³³

STAGES OF MOTOR DEVELOPMENT

Inspired by Gallahue, David L., “Triangulated Hourglass: A Life Span Process/Product Model of Motor Development,” in *Understanding Motor Development: Infants, Children, Adolescents, & Adults*, eds. D.L. Gallahue, J.C. Ozmun, and J.D. Goodway (Boston: McGraw-Hill, 2013).

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Sport for All, Play for Life: A Playbook to Get Every Kid in the Game. Available online at YouthReport.ProjectPlay.us.



GLOSSARY

FITNESS: The ability to perform moderate to vigorous levels of physical activity without undue fatigue and the capability of maintaining such ability throughout life. (American College of Sports Medicine)

FUNDAMENTAL MOVEMENT SKILLS: Gross motor skills that are the foundational movements for more complex and specialized skills required by children throughout their lives to competently and confidently participate in different games, sports, and recreational activities offered at school and in the community. (ACE Youth Fitness Manual)

HEALTH: Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. (World Health Organization)

OBESITY: Obesity is defined as a BMI at or above the 95th percentile for children of the same age and sex. (Centers for Disease Control and Prevention)

PHYSICAL ACTIVITY: All movements in everyday life, including work, recreation, exercise, and sporting activities. (World Health Organization)

PHYSICAL EDUCATION: Physical education provides students with a planned, sequential, K-12 standards-based program of curricula and instruction designed to develop motor skills, knowledge and behaviors for active living, physical fitness, sportsmanship, self-efficacy, and emotional intelligence. (SHAPE America)

PHYSICAL LITERACY: The ability, confidence, and desire to be physically active for life. (Aspen Institute Physical Literacy Working Group)

SPORT: All forms of physical activity that, through organized or casual play, aim to express or improve physical fitness and mental well-being. Participants may be motivated by internal or external rewards, and competition may be with others or themselves (personal challenge). (Aspen Institute Project Play)

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