# Draft
# Presentation to Educational Leadership and
# Dr. Linda Lane, PPS Superintendent

By Mark Rauterkus, swim and waterpolo coach.

Mark@Rauterkus.com, 412-298-3432 = cell. http://Rauterkus.blogspot.com

After an educational conference call on Early Childhood Education and the value of play, I wrote this article.

Calling for an overhaul and expansion of high-quality aquatics in times of budget cutbacks is possible because the plans deploy what is already available. Simply, use what we have and deliver what Pittsburgh kids need.

We have massive problems that are pressing hard against the Pittsburgh community. We've got

- violence,
- academic achievement gaps,
- obesity,
- so-called school reform trends with doubtful standards and accountability, and
- sustained cutbacks that have lasted for a decade and continue to grow.

The best news is we have everything we need. We have:

- swim pools,
- support of nonprofits,
- proof of concepts with astounding success,
- volunteerism,
- a defined, documented vision with specific plans, and
- a growing political will.

We must do what is best for the kids given these tough times of both

- budget cuts, and
- educational reform.

I think this aquatics overhaul for Pittsburgh delivers what the kids need, is achievable in the current fiscal climant, and is the right thing to do.

# Time to play

One aim is to defend children's right to play, grow, and learn in an era of school reform focused on standards and accountability.

Cuts within schools, the city and at social service agencies have changed experiences for kids. These are different times. Today's kids spend more time with TVs and video games.

Music, physical education, and even outdoor recess has contracted greatly. Pittsburgh used to have many "language magnet schools" introducing foreign vocabulary words in Kindergarten settings. Pittsburgh kids used to get string instruments in the third grade. Gone. Pittsburgh's, city-wide, "Centers," classes for arts and music, once held on Saturdays at CAPA, is no more. It isn't always safe for kids to play pick-up ball on the streets or in the parks like 'back in the day.'

Mayor Ravenstahl and PPS Superintendent, Doctor Lane, can join with the citizens and promote play-based early education and common-sense policy making. A push back for the sake of kids comes with actions and by standing with others in this fight, including:

- Alliance for Childhood,
- Teachers Resisting Unhealthy Children's Entertainment (TRUCE),
- Campaign for a Commercial-Free Childhood,
- Concerned Educators Allied for a Safe Environment (CEASE), and
- Defending the Early Years Project.
- Hundreds of educators who issued a statement of concern about alarming Common Core Standards for the early grades. http://www.edweek.org/media/joint_statement_on_core_standards.pdf.

The mayor and the school superintendent must ask, 'What are the kids not getting?'

**Negative Forces:**

A dark side of reform scares many parents and educators. A 'reform overdose' can generate 'deformed outcomes.' The miss-informed would rather build prisons than invest in educational programs.

The push to inappropriate standardized testing is happening. The re-writing of state standards for young children have led to the heavy use of standardized tests in kindergarten and the lower grades, despite their unreliability for assessing children under age eight. Current proposals from the miss-informed (National Governors Association and the Council of Chief State School Officers) go beyond most existing state standards. An absurd example: Every kindergartner must be able to write "all upper- and lowercase letters" and "read with sufficient accuracy and fluency to support comprehension."

It is misguided to intensify inappropriate testing in place of broader observational assessments that better serve the needs of young children. New research is showing that didactic instruction of discrete reading and math skills has already pushed play-based learning out of many kindergartens. Blocks and dress-up corners in many kindergarten classrooms are getting replaced by desks and worksheets. Testing in schools is moving to crowd out other important areas of learning. Overuse of didactic instruction and testing cuts off initiative, curiosity,and imagination. It limits their later engagement in school, the workplace and responsible citizenship. And, it interferes with the growth of healthy bodies

and essential sensory and motor skills—all best developed through playful and active hands-on learning.

The miss-informed educational reform standards are superficial. Counting to 100 by 10 is rote. Rather, seek conceptual knowledge, not superficial skill sets. Some adults seem to be more comfortable seeing young kids in chairs being neat. Making a mess and then doing the clean up should be a part of the play and learning.

There is little evidence that the newest trends lead to later success. While an introduction to books in early childhood is vital, research on the links between the intensive teaching of discrete reading skills in kindergarten and later success is inconclusive at best. Many countries with top-performing high-school students do not begin formal schooling until age six or seven. The miss-informed agendas conflict with cognitive science, neuroscience, child development, and early childhood education. Groups of educators have called on the National Governors Association and the Council of Chief State School Officers to suspend the drafting of standards for children in kindergarten through grade three.

A new wave of testing is washing over preschool activities in a bad way. It has become fashionable to give lip service to the importance of play. The reality: Play continues to disappear in many schools, even for the youngest.

Learning must go beyond literacy and math. Our kids need to learn how to play well with others, how to swim, how to listen and interact with a team. They need to learn about getting fit, how to follow a schedule, how to pace, race, finish and score. They need to know how to be defensive, aggressive, and offensive. They need to understand sportsmanship, running, time trials and car pools. As our kids learn all the above, the literacy and the math becomes a breeze.

Kids learn mighty lessons through their bodies and senses and with self expression. Kids need to have experiences where learning happens in three dimensional spaces. Just entering the swim pool, especially on winter days, gives total immersion. Natural ways of learning happen in the water. The swim pool is a learning laboratory unlike what may be happening in rigid classrooms where there are rules against running and other expressions of enthusiasm.

Many kids learn to wonder through a coaching voice that resonates within families and communities. Swimmers develop physical, social, emotional, problem-solving, self-regulation, and perspective-taking skills.

Rookie Camp Swimming is good for young children and every kid in Pittsburgh at the age of seven can be included in a free program at the Oliver Bath House starting in the fall of 2012.

The Winning Swimming Rookie Camp, geared to those age seven, provides a swim team setting that “amps up” typical swim lessons. The Rookie Camp delivers bigger, bolder, better benefits with buzz. Everyone still learns how to swim. Swimming is a great exercise, but to be a swimmer is to change character.

All learn, but especially young children, by being with others who are more experienced and older. The Rookie Camps' daily dry-land times have story-time visits with guest coaches that include middle school and high school swimmers. Kids learn by placing themselves in the shoes of others. Rookie Camp swimmers learn social awareness, how to care, how to solve problems together, and how to negotiate together.

Swim teachers are keen observers of children. Coaches pay attention to where the students are. Aquatic teachers work on what they see that the kids are able to understand. At the swim pool, we model, evaluate and give fresh beginnings to kids in new surroundings. Plus, kids have time to play and act it out at the pool. Rookie Camp serves plenty of opportunities for self regulation for kids. Kids get into roles, and they control themselves. They stay in their character and learn self control. Rookie Camp is for learning many concepts and becoming comfortable with each other.

Scaffolding, inventing from each other, demonstrations, teamwork coaching, making rule-based games and playing them are serious happenings. Seldom are children allowed to have outdoor discovery time with low structures. Rare are the chances for kids today to organize their settings. But that happens at swim practices as kids pick their own lanes, make up lane orders and choose to play goalie or not.

In hours beyond the regimented school day, we need to bump kids away from screens and get them to play together. Sitting passive before a screen weakens the capacity to imagine and have inventiveness for oneself. We don't know what damages are being done as our children don't discover their own sense of self. Today's kids are too often looking outside of themselves to be entertained with apps and screens. Rather, in Pittsburgh, lets allow the stories and the creative ideas to come from within. So much of life today is with virtual reality, let's create our own reality.

**Numbers**

Play situations, true number concepts, classifications and serialization forms the basis of being able to understand the concept of number.

Classroom sizes used to hover around 20 students. In 2012, PPS contracts swelled physical education classroom sizes for high school students to 44 students per class with one teacher. Best practices in swimming, especially with seven-year athletes, won't allow those inflated numbers. The Rookie Camp can give more attention to more kids with more coaches than is possible these days in our public school classrooms.

It takes time for children to come to understand symbols. We rush children, and if they don't understand right away, we start to think that they are different. The difference between “d” and “b” might be maturity. Consider how math is detached in the mind of a four-year-old who is shown a card that reads:

**(3 + 1 = ?)**

Inappropriate demands are coming to young children from assessments in schools at the age of four.

Bogus testing is unreliable at young ages. For example: One test given to five-year-olds asks the kids to identify as many numbers and letters in a minute. That's puzzling. Wee kids do not know how to race yet. Swim coaches know how strange it is to get five-year-olds to race. Rather, success at five comes with a float and bouncing off the bottom across the shallow end of the pool. Then at age seven, join the Rookie Camp. Staging races of merit can happen by age 8. After kids know how to race, those “academic” identification tests in time periods become meaningful.

Kids are intrigued by things that hold their interest. With interesting topics, they ask about things that are harder to understand, if we follow their interests. What is this? How is this? These things are passions and serve as openings to more knowledge. Rookie Camp Swimming is a choice and for diving deeper. Swimming becomes a giant gateway to good, thoughtful debate. Fans are fanatical. Rookie Camp makes swim and sports fans. Rookie Camp is a portal to discover, discuss and clash among our

favorites. Is it Phelps or Lochte? Why does that work for him? And, can it work for you too? At Rookie Camp, we certainly watch and re-watch the Olympics and cheer.

For the young lives, this concept of swimming serving as an intimate bridge to a vast unknown world might be a first-time encounter. Kids can get into it because swimming is deep, wide, personal and foreign. The clumsy kids as well as both the early and late-blooming kids can appreciate swimming's challenges and find a home within themselves with swimming too. A rich and fulfilling life has many such encounters where inspiration plants its seeds and brushes with greatness occur. Everyone should have that 'something' by the age of seven.

Seemingly, the lowest, most scripted curriculum and drill-based testing is headed to the poorest parts of society. Drill-based teaching is at odds with what happens at the Waldorf Schools. Wealthy families and the well-to-do-and-privileged emphasize that no child is like any other child. They all grow. Kids don't touch reading in the Waldorf system until they are seven. Likewise, in Finland, they don't teach reading until age seven. Kids learn to read at later ages in Finland, but by third grade, those in Finland are ahead of where the American kids are in reading.

What happens in the PPS school day is up to the school board and school administrators to decide – and not a swim coach with a blog. However, what happens at the public pools is up to taxpayers, advocates and professional swim coaches to influence. We must insure that the public pools are used for holistic instruction by the entire community – rich and poor alike. Sadly, in my humble opinion, too many of Pittsburgh's youngsters go through life without ever having a solid introduction into anything with a foundation for supporting long-term enrichment. Swimming is a great lifeline that can pull thousands into an exciting future of discovery and wellness. Of course everyone is not going to “get it.” But, with the help of the mayor and the superintendent, we can make it very difficult to ignore.

**Language development occurs meaningfully through play.**

Swimming opens a glossary of meaningful interactions with language. Rookie Camp participants often learn more than 10 words a day. Drills like 'catch-up' (one arm catches up to the other arm in the freestyle stroke) are described and done. In the stroke drill called catch-up, hands have to touch together, and the coach jokes that mustard and ketchup are not allowed in the pool.

**The achievement gap is not a distraction in the middle of the deep end.**

Swimming presents an equal opportunity for all kids. Needs are few: a swim suit and a pair of goggles. Both are affordable items and can be provided with organizations or facilities as necessary. To be sure, some of the poorest kids are the most independent. The poorest kids can be very confident and gracious and with higher level of problem solving. At Rookie Camp, we won't knock that out of them. The harder-edged expression, “I can't do that,” gets replaced with, “I'll try.”

In American communities, water polo is traditionally a sport for wealthy, older kids (ages 13 and older) in deeper water pools. In Pittsburgh, we can change that premise by structuring an affordable (if not gratis) program with younger kids in shallow waters. In a few years, as our kids grow, our city all stars will be able to match up with anyone, anywhere. On two consecutive years our city kids played tight games against an exclusive prep schools from New Jersey. In our third year, in September 2011, our city kids beat Upper Arlington's JV team in Columbus, Ohio. UA is one of Ohio's top public schools, and also quite affluent. Worldwide, waterpolo is wildly popular with younger kids.

**Concrete manipulatives hatch math wizards on the swim team.**

Swimming gets students to use manipulatives, a central mathematics concept. Manipulative use increases scores on retention and problem solving tests. Attitudes toward mathematics are improved when students have instruction with concrete materials provided by teachers knowledgeable about their use. Kids and classes that have great grasps of manipulatives outperform those who do not. This benefit holds across grade levels, ability levels, and topics. Many manipulatives and, in turn, math "makes sense" for swimmers.

Below is an example of one simple swim practice set that Rookie Campers would master:

Swim: 10 (repetitions) x 50 yards on 1:30 interval.

These forumlas, the one above in shorthand is, 10 x 50s @ 1:30, are the common building blocks for swim practices. I've published books filled with pages of workout numbers, sequences and formulas. *(Tide Teamwork, SprintSalo, A DAM Good Year, Coaching the Young Swimmer, Organizing Swimming Practices)*

Swimming coaches emphasize learning with understanding. Swimming instructions from the coach to the team give the young athletes new vocabulary richness with actions and experiences. Swimming coaches blab a foreign yet fun lingo packed with numbers, standards, records, zones, cuts, thresholds, qualifiers, sets, repeats, intervals, decimals, times (in tenths and hundreds of seconds to minutes, plus days, weeks and months). Coaches give kids descending, contrasting, tempo and intensity instructions. Expectations with heart rates help with self understandings and healthy awareness, but also make clear to the kids the difference between 55, 65 and 75 in beats per minute/BPM or in weight or in distance in meters.

Constructs and minipulatives jazz the swimming experience and makes more fertile ground for academic scholarship. An age-seven swimming team experience gives individuals an arsenal of **transferable skills**. The benefits are countless when one examines the collective impact with the families, car pools, lane leaders, team buddies, training groups, coaching staffs, junior assistants, volunteers, boosters and various institutional elements of support.

Swimming makes a new setting for young minds to absorb different, meaningful elements. Sadly, some students sometimes learn to use manipulatives only in a rote manner. They perform the correct steps, but have learned little. Daily encounters with the swim coach forces kids out of their comfort zones and beyond rote manner manipulatives. Swimming gets kids to live among numbers and be the agent of change to move their realm of being. As things click at the pool, that clicking cascades elsewhere. And for the faster swimmers who get it, the stop watch clicks sooner as they pick up speed, earn praise and grow.

Some day, PPS teachers may come to use swimming and sports manipulatives as an extra pathway for mathematics teaching. Swimming talk can pour into the classrooms as teachers reflect on their use of representations of mathematical ideas with students who swim. Aspects of their instruction can change when the classrooms are filled with swimmers. Not only are the kids knowing their numbers in an intimate way, but their bodies are settled, relaxed and defused from the prior exertion of yesterday's workout and its twenty-five twenty-fives on twenty five. (Shorthand: 25 x 25s @ :25.) That's my favorite swimming practice set to coach. We deploy that with my teams often. Each kid swims 25 times the distance of 25 yards on an interval of 25-seconds.

Educators of mathematics indicate that "concrete" is good and “abstract” is bad. Swimming diminishes the nasty "abstract," which is much more difficult for the wee ones to understand. Students that swim get a wide range of understandings and tools. Research suggest that instruction begin "concretely." It also warns that in-school-teaching of manipulatives are not sufficient to guarantee meaningful learning. So, swim teams are needed for kids for benefits of both play and brain-developmental homework.

To understand the role of concrete manipulatives and any concrete-to-abstract pedagogical sequence, we must further define what we mean by "concrete." Most practitioners and researchers argue that manipulatives are effective because they are concrete. By "concrete," they probably mean objects that students can grasp with their hands. This sensory nature ostensibly makes manipulatives "real" and connected with one’s intuitively meaningful personal self, and therefore helpful.

Swimming gets students to make connections between manipulatives and nascent ideas. Two classroom tools that helps kids perform addition are the classic “number line” and the abacus. The students make external actions with each. Meanwhile, at the pool, the number line comes to play as the team does an intra-squad match with bodies wearing numbered waterpolo caps. Likewise, at the pool, the mental activity of counting is done by using the lane-line beads to keep everyone in the water straight as to the number of repeats completed. Lane lines and water polo caps are playful abacus and number lines.

Swimmers reflect on their actions with manipulatives with team meetings. Although manipulatives have an important place in learning, their physicality does not carry the meaning of the mathematical idea. Kids need both teachers and coaches who can reflect on their students' representations for mathematical ideas and help them develop sophisticated mathematical representations. "Although kinesthetic experience can enhance perception and thinking, understanding does not travel through the fingertips and up the arm."

Swimming presents a myriad of ways to get young people to learn through play and active experiences. Swimming in a holistic program makes meaningful and engaged learning. Swimming makes a contrast to superficial, mechanical learning with its testing and disjointed implications. Swimming can't be disjointed, really. Swimming at age seven is about being joined in a fun way.

At Rookie Camp, we connect the dots, and we connect various swim sites as well. The Swimming Rookie Camps deliver short lessons with videos often via teleconference at poolside. The team, standing or sitting on kick boards while dripping wet, interact with expert coaches at other sites to recap lessons. Often, other kids are in on the interactions too.

Further, these concrete understandings in swimming are not always referring to physical objects nor to those just to the swimmers at age seven. Benefits continue with digital assets, technology and for the ones in the later grades. Science fair projects, swimmers' think-a-thons and postal swim meets are a few of the middle-year activities to promote in a dynamic, smart, aquatics program.

In higher grades, biology, physics and kinesiology all offer great sport-specific, concrete manipulatives. Swimming provides a ton of Sensory-Concrete Knowledge that could fill an entire academic career, if desired. But, as the kids mature, other sports often call. Ex-swimmers enter other sports and activities stronger -- physically, socially and academically. Swim coaches are thrilled as kids grow out of swimming and into other athletic pursuits. For the program to flourish, it should have a wide base of participants. The Rookie Camps for seven-year-olds is a springboard to other things yet to come. After youngsters out-grow Rookie Camp, individuals engaged in other aquatic specializations, growing year-to-year. Waterpolo, nippers (i.e., junior guards), lifeguarding, underwater hockey, triathlons, cycling, syncro, modern pentathlon and kayaking are in the mix.

These other journeys are still within the Pittsburgh aquatics landscape that must be part of the global overhaul. Leadership must plan and be expected to press forward with other budding programming challenges for the sake of capacity. The 750 7-year-old swimmers in the Rookie Camp program in 2013 are expected to value quality programming and crave a variety of activities in 2014 and beyond.

Aquatics can catapult athletes to other sports. Baseball, basketball, football, golf, cross-country, hockey, to name a few, would benefit greatly as confident participants join their ranks already aware of sportsmanship and good team behaviors. Plus, life offers countless pursuits beyond sports: music, theater, dance, outdoors. All in all, the Rookie Camp experience needs to be a bedrock for whatever else is to come in life in public spaces, parks and schools. Swimming can be the model to set the stage for the theme of "plays well with others."

**Summary**

It is fine to survey teachers, program directors, and child development experts. It is fine to speak out with well-reasoned arguments against inappropriate standards, assessments, and classroom practices. It is fine to protest a governor's visit to demand more educational funding. However, it is much better to

just fix the problem. Let's provide Pittsburgh kids with a competitive swim team experience (Winning Swimming Rookie Camp) that is rich with play and promotes appropriate activities for childhood times while costing little to accomplish.

Even naysayers who trumpet rigor for early childhood would agree: Swimming builds stamina to assist kids so that they are better able to focus on the long hours of instruction in literacy and math.

**Citiparks Summary**

Healthy environments for youngsters must be developmentally appropriate. Padded ground-surfaces under swings, play structures for climbing, free lunch programs and even the newer spray parks are fine amenities for tykes. A free week of swim lessons and an afternoon encounter with the art cart is fun. Taking a dip on a hot summer day at the local public pool with friends is refreshing.

But the Rookie Swim Camps take developmentally appropriate healthy environments to a new level. The Rookie Swim Camps further root kids to community along a course of an engaged life within Pittsburgh's public spaces. The enormity of the Rookie Swim Camps, and what spawns from them as children grow, should impact thousands every year. The Rookie Swim Camps and “playing well with others” is what's needed next in the struggle to reverse the migration out of the city, the academic achievement gap and youth violence.

Age 7 has traditionally been the "age of reason" for most activities. Regardless of swimming ability, a 7 year old is still often not capable of making good safety decisions on his or her own; "Am I tired, dehydrated, in too deep, is the play around me too rough by the older kids?" Of course we will teach water safety and plain old survival floating. But by the third week we can be doing butterfly and gearing up for waterpolo tournaments.