



Active Play – Active Learning Project:

Exploring practical strategies for increasing activity and learning during the school day

Today's Moderator



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About our Center



We are an international leader in conducting research and providing programs that promote healthy living for children, their families and communities.

Our work fosters improved health behaviors among youth, influences policy and environmental change to support healthy living, and advances professional education and community service.

Our vision: *Healthy children in a healthy world*

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Exploring practical strategies for increasing activity and learning during the school day



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CATCH Webinar 2014

Today's Webinar

- ❖ **Active learning and school-based activity:**
benefits for children's health and learning
- ❖ **Active Play – Active Learning Project**
- ❖ **Experience from the Field**
 - ❖ School district-level experience
 - ❖ Active Learning lessons learned

PA Guidelines for Children & Adolescents (ages 6-17)

❖ **1 hour or more of PA every day.** (USDHHS 2008)

- Most of the 1 hour should be MPA or VPA
- Vigorous intensity activity on ≥ 3 days/week.
- Muscle-strengthening and bone-strengthening activity ≥ 3 days/ week.

❖ **IOM *Educating the Student Body* (2013):**

District and school administrators, teachers & parents should create a whole-of-school approach to PA that fosters 60 minutes of MVPA per day (>50% of which occurs in school)

- ✓ "...through recess, dedicated classroom PA time, and other opportunities."



Marathon Kids

Academic and Health Benefits of *Physical Activity & Active Learning*

Physical Activity (PA): “Substantial evidence that PA can improve academic achievement” (CDC, 2010)

Activity Breaks (*brain breaks/boosters...*)

- **Meaningful levels of PA** (Donnelly et al., 2009; Katz et al., 2010; Rasberry et al., 2011; Whitt-Glover et al., 2011)
- **Performance on standardized tests.** (Sibley et al., 2003; Donnelly et al., '09; Hollar et al., 2010)
- **Time-on-task & concentration** (Whitt-Glover et al., 2011; CDC, '10)
 - Students with most difficulty remaining on task (Grieco et al., 2009)

Time Spent Outdoors (*& outdoor learning*)

- **Children's PA & mental health.** (Cleland et al., 2008; Wen et al., 2009; McCurdy et al., 2010).

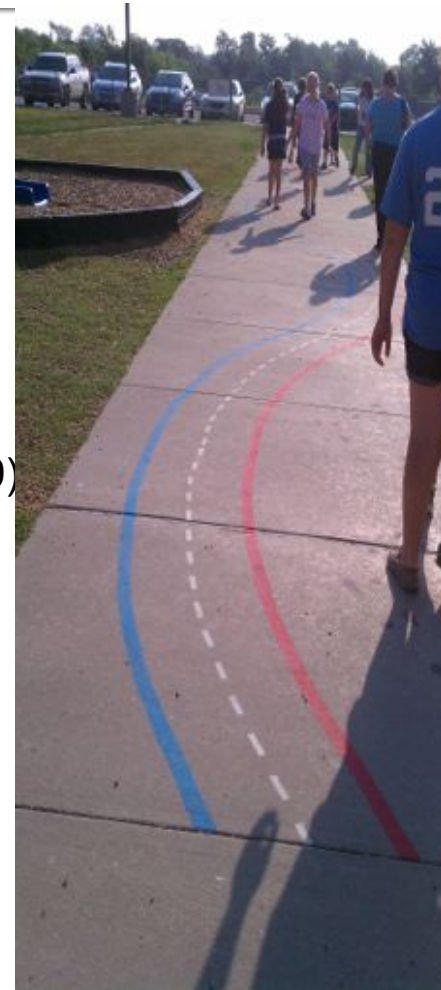
Recess: PA & social development benefits, class behavior & time on task (e.g., Springer et al., 2013; CDC, 2010)



Marathon Kids

Theoretical Foundation for *Active Learning Approaches*

- **Theory of Multiple Intelligences** (Gardner, 2000)
 - Multiple learning styles
- **Multiple educational approaches** help students learn a topic better (e.g., kinesthetic, auditory, visual)(e.g., Onika et al., '08; Int' l Reading Assoc, '99)
- **Ecological perspectives** of health behavior:
 - *“You are a product of your environment”*
 - Environments (policy, social, information and built) and settings (school, community, home) shape children' s PA (Sallis et al., 2008)



Outdoor Writing Pad

Active Play-Active Learning Project (APAL)

Aims

- To promote active play and active learning via low-cost, fun, and practical strategies

Guiding Principles

- Co-learning with teachers, students, aftercare providers, community leaders
- Provide strategies for free/materials at cost
- Local decision making & action
- Partnerships
- Student-centered
- Activate activity!: *Dissemination*



APAL Strategies

- **Peer-Led Games Process** (10-20 min. activity time)
 - ✓ Increase MVPA: recess/activity time
 - ✓ Promote social competencies & leadership
- **Classroom Brain Breaks** (<10 min. classroom activity dynamics)
 - ✓ Provide active classroom transitions
 - ✓ Reinforce academic topics in an active way
- **Playground Markings Enhancement**
 - ✓ Promote activity during recess
 - ✓ Reinforce academic topics in an active way during class time



APAL Development Phases

Phase I (2009-11): Pilot Study (Austin, TX; Michael & Susan Dell Foundation) n= 12 schools, 3rd graders

Phase II (2010-12): Replication Study (Pueblo, Co; Colorado Health Foundation): n=12 schools, 2nd and 4th graders

Phase III (2011-12): Demonstration Study (Del Valle & Bastrop; St David's Foundation): n=10 elem. Schools

Phase IV (2013-2015): Dissemination (Del Valle & Bastrop, Texas and Pueblo, Colorado; St. David's & CHF) n=25+ schools

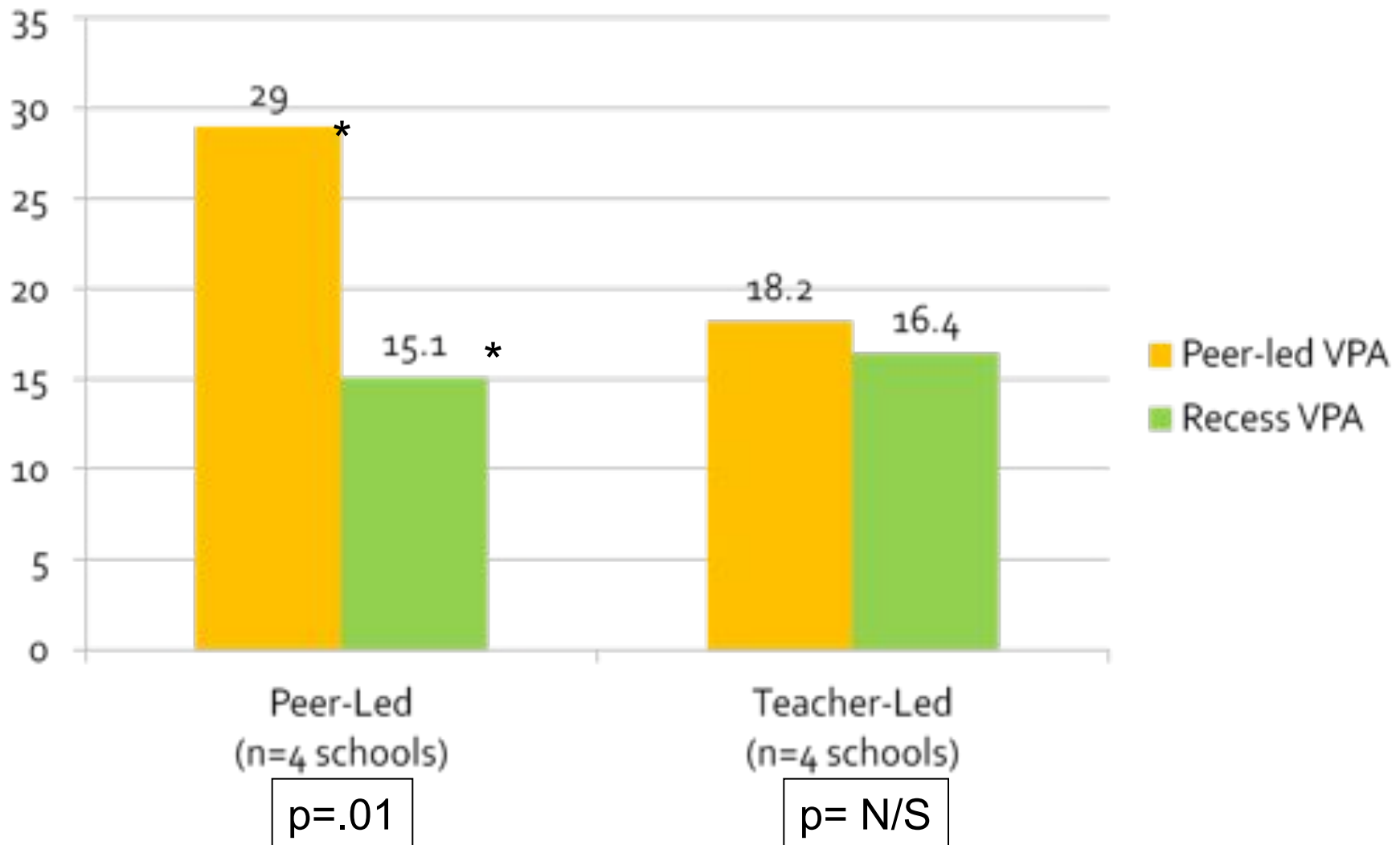


Peer-Led Games Process

- ❖ Sport Education Model (Siedentop, '94, '98):
- ❖ Student Teams
- ❖ Leadership Roles
- ❖ High Activity Games (CATCH)
- ❖ Process & Guidelines



Mean percentage of time 3rd graders engaged in VPA during *peer-led, teacher-led, & recess*, Spring 2010.
(n=71 observations, 8 schools, Austin, TX)



Student & Teacher Feedback with APAL Peer-led Games Process: Austin, Texas-Spring & Fall 2010

Student Assessment (n=320)

- High level of satisfaction & easy to implmnt.
- Desire to play next year & outside of school
- No gender differences in ratings.

Teacher Assessment (n=16 teachers)

- “It gave organization & structure in a fun way.”
- Students are capable of leading the games;
- Students are given opportunity to learn about leadership, responsibility & team work;
- May take time for some students to learn the rules of the game; greater clarity on role of teacher; PE teacher is a valuable asset in teaching games.
- “That picking my most difficult behavior problems as captains really worked. I was shocked.”



Brain Breaks

Brain Breaks should be used...

- ✔ ...to begin the day or an activity. (test!)
- ✔ ...whenever students need a break from an extended learning period.
- ✔ ...whenever students are transitioning from one subject/activity to another.
- ✔ ...whenever students are waiting in line to go to specials, lunch, library, etc.
- ✔ ...whenever the teacher sees the need.

**Brain Breaks should be used
throughout the day, every day!**

Tips for conducting active learning/ brain breaks

- Planning and preparation
 - What will you do?
 - How much space/equipment do you need?
- Clear expectations
 - Organizing groups
 - Appropriate behavior
- Clear start and stop signals
- Check for understanding

Example Brain Breaks

- Everyone please stand up
- Make a “thumbs up” sign with your right hand
- Make a fist with your pinkie sticking out with your left hand
- Now switch what each hand is doing
- Now switch back
- <http://brainbreaks.blogspot.com/2009/03/thumb-and-pinkie.html>

Playground markings increase children's activity

- Stratton (2000): UK Children 5-7 yrs
MVPA increased by 18 mins/d. during school
- Stratton & Mullan (2005): 4-11 yrs:
MVPA increased from 37% to 50%.
- Ridgers et al. (2007): UK elementary school boys & girls (n=26 schools): increased MVPA and VPA at 6 months (accelerometer).
- Loucaides et al. (2009): Cyprus. Children in markings & games equipment condition had increased mean steps (pedometer).
- Springer et al. "Active Play Project": Texas: 3rd grade students in markings schools (n=4) >MPVA vs. "usual" schools (n=4) (p<.05) (SOFIT observation, paper in process)





Locomotor Foot Patterns





***Hop & Mosey* Locomoter Patterns**

Outdoor Classroom



Multiplication Chart



Ruler



The United States Map



World Map



Tornado Cycle

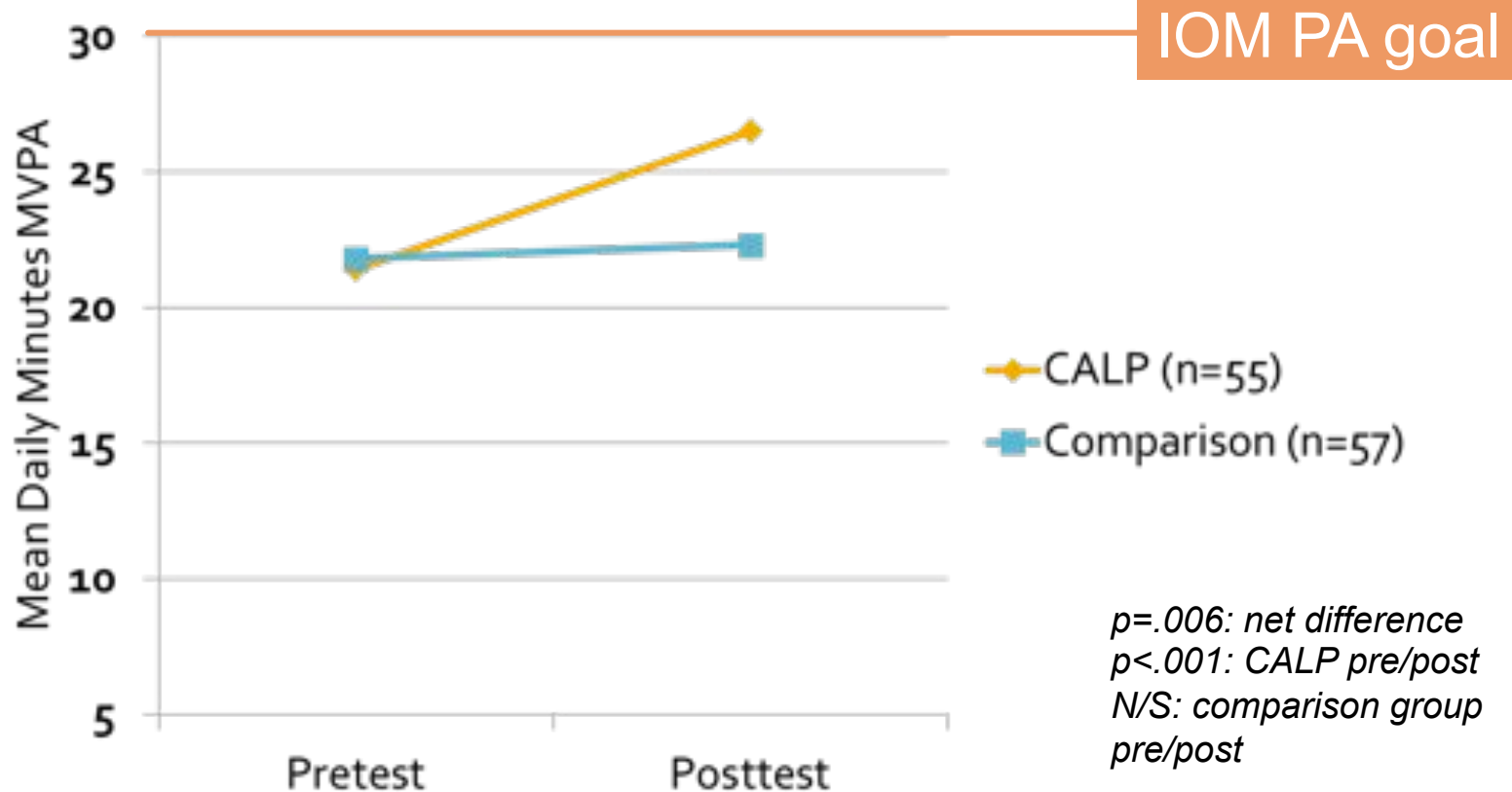


Butterfly Life Cycle



Solar System

Mean daily minutes of MVPA during school day- 4th graders, Colorado Active Learning Project, Pueblo, CO (n=6 schools), 2012



*Adjusted for gender, BMI, and wear time.

Springer, Stovall et al. (in process)

Austin Independent School District

Active Learning

- Whole Child Every Child
 - WOW Time to meet the 135 minutes per week
 - Brain Breaks throughout the day
- Office of Academics support
 - CWC (Curriculum Writer's Cadre) emphasis on active learning
 - Professional development for teacher support
 - Active lessons written during summer
- Website support for teachers



Promoting Active Learning: *Lessons Learned*

- “Active Learning” Champion (grade level or school)
- Involve teachers (PE, art, class), principal, PTA, students- create ownership! (markings, activities)
 - Painting markings = other benefits (social cohesion)
- Roll out AL strategies at different stages
- Training! *Need for ongoing training & support*
 - Schools are different = *No cookie cutter approach...Adapt as needed.*
- Faculty mtgs: practice what you preach & role model!
- *Active Learning* promotions: feasible and well received (e.g., “enter brain break to win raffle”)
- Institutionalize... Align with learning objectives



APAL Project Partners

UT School of Public Health

- Andrew Springer (Co-Creator)
- Heather Atteberry (Proj. Dir.)
- Joey Walker (Proj. Dir.)

Austin ISD

- Pat Werner (Co-Creator)
- Michele Rusnak

Consultants

- Griffon Ramsey (Artist)
- Ann Graham (PR/Organizer)

Creative Action

- Sarah Rinner, Karen LaShelle, Natalie Goodnow
Cassie Swayze

Pueblo City- County Health

- Miranda Stovall,
- Sarah Mayes

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- Irma Guerra-Scott, Molly Garcia, Kathy Cawthron

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Thank You

HELP US GROW *Active Play-Active Learning!*

Like us on Facebook:

<https://www.facebook.com/ActivePlayProject>

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Questions?



Thank You!

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