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5-7-2013

## School Learning Gardens as Multicultural Hubs for Sustainability: PSU-PPS Food Systems Partnerships in Outer Southeast Portland

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#### Citation Details

Williams, Dilafruz R.; Kelley, Sybil Schantz; Blanchard, Leslie; Hieserich, Brooke; and Zintel, Jon, "School Learning Gardens as Multicultural Hubs for Sustainability: PSU-PPS Food Systems Partnerships in Outer Southeast Portland" (2013). Educational Leadership and Policy Faculty Publications and Presentations. Paper 47.

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# School Learning Gardens as Multicultural Hubs for Sustainability: PSU-PPS Food Systems Partnerships in Outer Southeast Portland

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May 7, 2013
Research to Action Symposium

Institute for Sustainable Solutions Portland State University

# Convergence of public interests

(1) OBESITY, HEALTH, AND FOOD INSECURITY

Childhood obesity rates are at an all-time high; waves of salmonella and *E. Coli* outbreaks; and the increase in type 2 diabetes, especially affecting non-white youth populations

(2) NO CHILD LEFT INSIDE Coalition

Richard Louv's book-Last Child in the Woods: Nature Deficit Disorder; Children and Nature network

(3) Concern: HIGH SCHOOL DROPOUT RATE

Historical context/changing face of outer SE neighborhood: Diverse, multicultural community with high poverty rates, high levels of food insecurity, influx of refugees/immigrants; limited access to healthy food choices

Since 2002, team of PSU faculty and graduate students with long-term focused projects, on-going research, and relationships have jointly built learning gardens partnering with K-8 PPS schools, including SUN (Schools United Neighborhoods)

Capstones/CBL courses involve PSU students in robust community-university-schools partnerships at these sites. Partnerships: food systems, health, sustainability, academic excellence





Partner Schools	Grades	Students #	Low SES: %	White %
Kelly	K-5	626	84	50
Lane	6-8	486	85	34
Lent	K-8	573	88	39
Woodmere	K-5	383	84	26
TOTAL		2068		



- School gardens, professional development, and research includes these sites (Others in southeast Portland include Lewis, Sunnyside schools
- on how ethnic minority students learn
  Science is a project since 2011.

Research: Garden-based learning shows positive effects on children's vegetable eating habits; PSU is filling gaps in research related to academic achievement, through longitudinal research at several schools.

Also, PSU-PPS partnerships for professional development of teachers in garden-based learning and links with food.

Outcomes: Several publications related to garden-based learning, food systems. Plus, over 40 Master's theses, research projects, chapters, journal articles, and one book on the topic with PPS personnel also coauthors: (Williams & Dixon, 2013; Kelly & Williams, 2013; Williams & Brown, 2012; Skinner, et al., 2010)



A somewhat shy 5<sup>th</sup> grader shares the work that she and her friends accomplished during the summer garden club to curious 1<sup>st</sup> graders and their teachers. While leading this tour, she and other 2<sup>nd</sup>-5<sup>th</sup> grade students proudly explained square foot gardening and vegetable choices, while also (unbeknownst to them) practiced their speaking and communication skills, deepening their own learning experience.



In Summer 2012, teachers had the rare opportunity to interact with students in very small groups in the learning gardens, giving them the chance to see how students make sense of their observations. After each session with the students, teachers had time to debrief together, sharing their insights and making plans for increasing student engagement and learning.



Apple haiku: 5th graders

Spartan
It's as red as blood
With stripes of green grass
After taste is pie

Cortland
Thick flames of sweetness
Yellow interrupts dark red
I'm full of sugar now.

### **RECENT PUBLICATIONS, PSU faculty and graduate students**

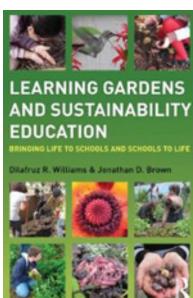
Williams, D. R. & Dixon, P.S. (2013). Impact of garden-based learning on academic outcomes in schools: Synthesis of research, 1990-2010. *Review of Educational Research*.

Kelly, S. & Williams, D. R. (2013, in press). Teacher professional learning communities for

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Williams, D. R. & Brown, J. D. (2012). *Learning gardens and sustainability education: Bringing life to schools and schools to life*. New York, NY: Routledge.

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Contd...

### RECENT PUBLICATIONS, PSU faculty and graduate students – continued - 2

Williams, D. R. (2012). 4 inches of living soil: Teaching biodiversity in the Learning Gardens. A photo essay. *Journal of Sustainability Education*.

http://www.jsedimensions.org/wordpress/content/4-inches-of-living-soil-teaching-biodiversity-in-the-learning-gardens-a-photo-essay 2012 03/

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Williams, D. R. (2008). Sustainability education's gift: Learning patterns and relationships. *International Journal of Education for Sustainable Development*, 2 (1):45-50.