



MORNINGSIDE
COLLEGE

**Implementing the Morningside College Garden:
An Innovative Approach to Empowering Student
Learning**

Dr. Thomas H. Paulsen
Associate Professor & Department Head

Student Empowerment

- “Integral to the learning process” (Frymier, Shulman, & Houser, 1996)
- Set of motivational processes that increase...
 - Increase personal initiation
 - Persistence to complete a task
 - Feelings of self-efficacy (Conger & Kanungo, 1988)
- Four dimensions of empowerment (Deci & Ryan, 1985)
 - Meaningfulness
 - Competence
 - Impact
 - Choice

Student Empowerment

- Connections to *Self-Determination Theory* (Deci & Ryan)

Similarities Across Human Needs and Empowerment Dimensions

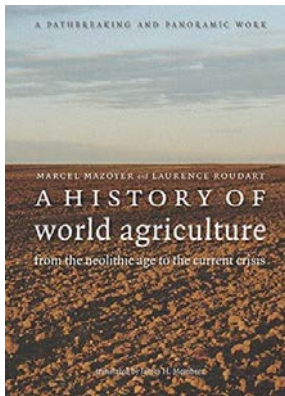
Human Needs	Empowerment Dimensions
Deci and Ryan (1985; 2002)	
Autonomy (control, personal agency)	Autonomy (self-direction)
Competence (efficacy)	Competence (confidence)
	Impact (influence)

Student empowerment is highly (and positively) correlated with intrinsic motivation (Brooks & Young, 2011)

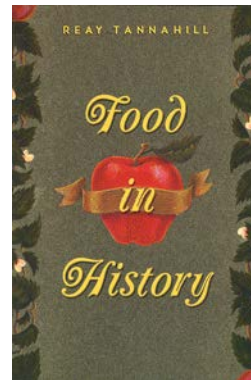
Human Needs and Empowerment Dimensions (Brooks & Young, 2011)

How did this all begin?

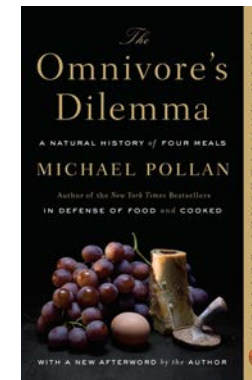
Scheduled to teach a Global Experiences course *History of Food & Agriculture*



Mazoyer, M., Roudart, L., & Membrez, J. H., trans. (2006) *A History of World Agriculture: From the Neolithic Age to the Current Crisis*. New York, NY: Earthscan: Taylor & Francis Group/Routledge.

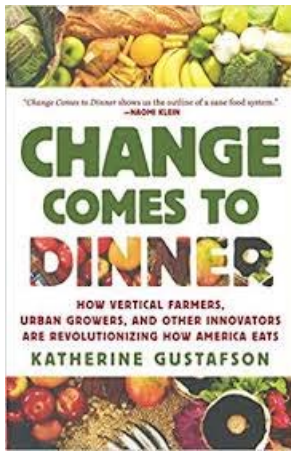


Tannahill, R. (1988). *Food in History*. New York, NY: Three Rivers Press.



Pollan, M. (2006). *The Omnivore's Dilemma: A Natural History of Four Meals*. New York: The Penguin Press.

How did this all begin?



Gustafson, K. (2012). *Change Comes to Dinner*. New York, NY: St. Martin's Press.

Final Exam: USDA NIFA Grant Narrative



How did this all begin?

Wellmark Healthy Living Small Match Grant



Establishment of a Club



Created and supported by Morningside College, The Wellmark Foundation, Applied Agriculture and Food Studies, Student Government, Ag Club, Garden Club, Sodexo Food Services, students, faculty and staff.



Building the Garden

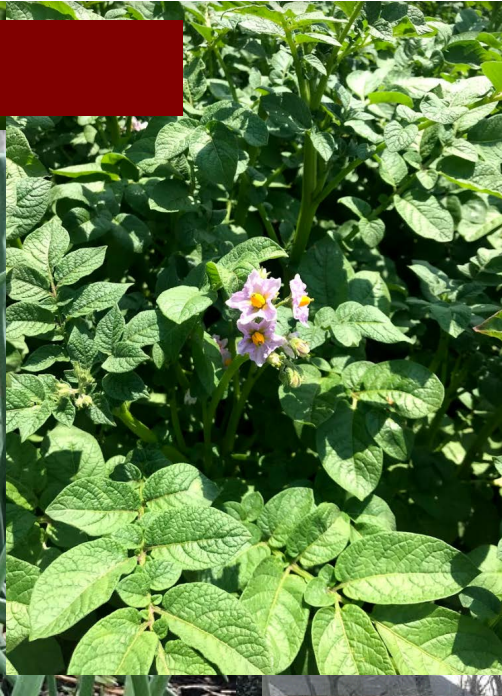


Developing Fundraisers



Learning Production & Food

Safety



Engaging in Outreach



Feeding Peers



Curricular Integration



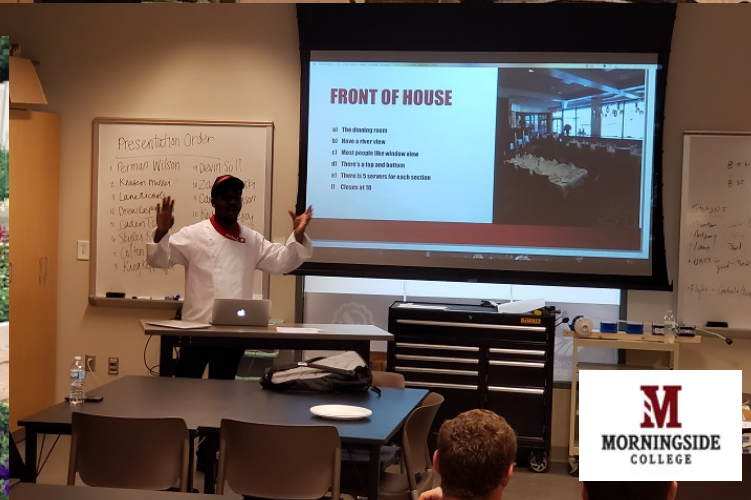
Engaging Students in Risk Management
Assessment in a College Garden

Dr. Annie Kinwa-Muzinga

Professor of Agribusiness
Department of Applied Agricultural and Food Studies



Research and Internships



Garden to Table Experience

Fresh Produce

- 2033 Pounds of produce harvested
- 1075 People served fresh garden produce per day
- 470 Paid hours in the garden
- 21 Days of fresh produce served
- 5 Different types of fresh vegetables served
- 4 Interns



Garden to Table Experience

Educational Impact

- 1550 Experiential learning hours in the garden
- 170 Students directly involved in co-curricular activities
- 18 AAFS lab sessions in the garden
- 10 College majors represented
Applied Agriculture and Food Studies, Agricultural Education, Biology, Business, Education, Marketing, Nursing, Non Profit Management, Political Science, Religion
- 7 Classes engaged in garden planning and activities
- 4 Demonstration plots managed by the Crop Production
- 1 Cover crop research project




Garden to Table Experience

Outreach Impact

- 650 Community members engaged
Boys and Girls Club, Native American Childcare Center, Morningside Mentors in Science, Spalding Elementary, Mater Dei Catholic School, Omnicron Delta Kappa
- 80 Elementary students served during *Into the Streets*
- \$10,000 Wellmark Healthy Living Grant




Learner Outcomes



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**Garden
to Table
Experience**



**MORNINGSIDE
MUSTANGS**

The Department of Applied Agricultural & Food Studies Dr. Thomas H. Paulsen, Associate Professor

Implementation Year Impact of the Morningside College Garden: An Outcomes Framework Approach

Introduction


- Recently, there has been a renewed public interest in food-related programs and initiatives in the US. School gardens exhibit many educational benefits. (Diaz & Dixon, 2011)
- Experiential garden-based curricular, co-curricular, and outreach activities were implemented.
- Student perceived impact of 14 research-based outcomes was collected. (Diaz, Warner, & Webb, 2018)

Conceptual Framework

- Diaz, Warner, & Webb's (2018) *Framework for the Evaluation of School Gardens* was used.
- 14 *Immediate*, 13 *Intermediate*, and 11 *Long Term Outcomes* for school gardens.
- Provides a "solid foundation for an outcomes-driven school garden program" (Diaz, Warner, & Webb, 2018, p. 161)

Methods

- Census of students (N=170) who participated in garden-based curriculum or co-curricular activities in the Morningside Garden's initial year
- 80 usable responses (47% response rate)
- Electronic, email questionnaire
- *Post hoc* reliability was excellent ($\alpha=0.98$)




Student Perceptions of Garden Outcome Attainment by Frequency and Percentage

	1	2	3	4	5	6
School Garden Immediate Outcome						
Increase my appreciation of local food system	4(4.0)	3(3.0)	3(3.0)	17(16.3)	24(23.7)	18(17.8)
Understand the value of a garden	5(5.0)	5(5.0)	2(2.0)	18(17.8)	30(29.7)	19(18.8)
Want to eat more nutritious foods	6(5.9)	4(4.0)	5(5.0)	28(27.7)	24(23.8)	13(12.9)
Improve knowledge of natural environment	5(5.0)	7(6.9)	5(5.0)	23(22.8)	24(23.8)	14(13.9)
Increase knowledge of gardening best practices	6(5.9)	6(5.9)	7(6.9)	20(19.8)	25(24.8)	15(14.9)
Connect the garden to other disciplines	5(5.0)	5(5.0)	2(2.0)	22(21.8)	30(29.7)	15(14.9)
Increase my interest in growing my own food	6(5.9)	9(8.9)	8(7.9)	19(18.8)	22(21.8)	16(15.8)
Increase my knowledge of plant identification	5(5.0)	12(11.9)	1(1.0)	24(23.8)	25(24.8)	13(12.9)
Increase my knowledge of healthy eating habits	6(5.9)	10(9.9)	6(5.9)	27(26.7)	16(15.8)	15(14.9)
Understand the importance of healthy eating	6(5.9)	10(9.9)	7(6.9)	25(24.8)	23(22.8)	9(8.9)
Increase knowledge of where food comes from	6(5.9)	9(8.9)	5(5.0)	30(29.7)	19(18.8)	11(10.9)
Increase my leadership and responsibility	6(5.9)	8(7.9)	4(4.0)	21(20.8)	26(25.8)	14(13.9)
Increase knowledge about nutrition	7(6.9)	14(13.9)	6(5.9)	21(20.8)	22(21.8)	10(9.9)
Foster a love of gardening	6(5.9)	8(7.9)	6(5.9)	27(26.7)	20(19.8)	13(12.9)

Note: 1=Strongly disagree, 2=Disagree, 3=Somewhat disagree, 4=Somewhat agree, 5=Agree, 6=Strongly agree. Mode indicated in bold.



THANK YOU TO EVERYONE WHO HELPED MAKE THE GARDEN A SUCCESS



Conclusions

- Students who participated in garden-related activities increased their knowledge and understanding of key garden outcomes
- Outcome-driven programming provides students with high levels of attainment
- Increased appreciation of local food systems, interdisciplinary connections, and a better understanding of the value of a garden provide an focus for activity development.

Implications/Recommendations


- Study has implications for those who develop curricular and co-curricular garden programming
- Backward design principles focusing upon predefined school garden outcomes should be used
- Additional research regarding *Intermediate* and *Long-term Outcomes* should be implemented

References


Diaz, J. M., Warner, L. A., & Webb, S. T. (2018). Outcome framework for school garden program development and evaluation: A Delphi approach. *Journal of Agricultural Education*, 59(2), p. 143-165. doi: 10.5032/jae.2018.0243

Williams, D. R., & Dixon, P. S. (2011). Impact of garden-based learning on academic outcomes in schools: Synthesis of research between 1990 and 2010. *Review of Educational Research*, 81(2), 211-235. doi: 10.3102/0004654311475824






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Student

The garden allowed me to:

- Develop leadership and cooperation skills
- Improve and diversify my leadership skills
- Improve my social interaction with peers
- Advocate for agriculture in my athletic setting
- Communicate my sustainability practices to my peers
- Develop my management skills
- Educate youth about growing food
- Improve my self-awareness and self-reliance

Student empowerment is highly (and positively) correlated with intrinsic motivation (Brooks & Young, 2011)



Questions?

