

The Systems Approach to Healthy Community Using LSU AgCenter Resources and Leadership



Author

Grace R. Peterson, Ph.D.
Associate Extension Agent,
Northwest Region
LSU AgCenter

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Louisiana State University Agricultural Center

William B. Richardson,
Chancellor

Louisiana Agricultural Experiment Station

John S. Russin, Vice
Chancellor and Director

Louisiana Cooperative Extension Service

Paul D. Coreil, Vice
Chancellor and Director

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The LSU AgCenter is a statewide campus of the LSU System and provides equal opportunities in programs and employment.



Purpose:

This paper gives an introductory overview of the Systems Approach to Healthy Community that is being used by the LSU AgCenter in its Northwest Louisiana Region. It briefly explores some theoretical and conceptual ideas underlying the basic approach, and it presents a strategy and a logic model that illustrate several aspects of how this approach relates to the U.S. Department of Agriculture's Community Nutrition Education Logic Model. It also describes how this approach has been successfully tested to illustrate its principles, and it discusses a possible scenario for expanding this strategy on a wider scale, with the LSU AgCenter facilitating the creation of a healthy community firmly centered in a healthy food system. One expansion strategy is to develop neighborhood food system hubs based on the FIT (Food Initiative Task Force) for Kids model.

Situation:

Since its beginning, the LSU AgCenter has been the source of research-based information for the communities it serves. With the passage of time, the nature of those communities has undergone radical change. The sense of community cohesiveness has deteriorated, which has contributed to our young people not learning the skills to build healthy lifestyles. Urbanization has led to new problems – such as “food deserts” in which our citizens lack access to healthful food and the basic knowledge and understanding of agriculture and nutrition. Many of our stakeholders have lost touch with the importance of agriculture in their lives. This means that the role of the LSU AgCenter is changing from its earlier position of delivering knowledge to communities that already have the context to use it and the networks to preserve it to a new position of being a builder of community networks. We must look at strengthening the foundations of communities for the people we serve so they can best use the information provided. The LSU AgCenter, as a change agent, has opportunities to help build the foundations of the communities that can better receive and benefit from research-based information.

The LSU AgCenter:

The LSU AgCenter is uniquely positioned to serve communities in this changing climate. The mission of cooperative extension is to take research-based information into communities through its extension agents. It has always taken a multidisciplinary approach to supporting the needs of entire communities, taking a collaborative and systems perspective long before that became a trend in other academic environments. The LSU AgCenter can address community health challenges with a systems approach that targets social networks, as well as individual behaviors, including the consumption of nutritious food and increased physical activity.

Need for Questioning Assumptions:

To create programs that build healthy communities it is necessary to question some basic assumptions. Any program designed to obtain both short-term measurable outcomes and long-term behavioral and social changes must address more than lesson plan design and evaluation tools to be used. Theoretical perspectives affect every aspect of program design and delivery. In a program designed to obtain measurable changes in health and nutritional choices, it is important to clearly understand assumptions about how that change occurs – what motivates that change and what factors influence that change.

Without a systems perspective, we often assume behavioral change can and should be based on an increase in the knowledge the participants obtain. Specifically, the assumption is that people will make positive changes and more informed choices if they are given enough relevant information. We also often assume all of the relevant factors of behavioral change take place solely within the individual, without reference to their family, social and cultural contexts. If behavior is assumed to be about individual choice without regard to context, then programs will be developed to affect only, or primarily, the individual.

Another assumption is that individuals are primarily motivated to make changes by their expectation of outcomes – what they will get or not get as a result of their choices. Programs often are designed with the thought of creating a “reward” for behavioral compliance – such as fun games or prizes.

With these two assumptions, programs target outcomes limited to short-term individual change without an understanding of the important roles of family, social and cultural contexts. If participants are informed of all the benefits of good nutrition and the hazards of poor nutrition, surely they will make better choices. These kinds of assumptions can be questioned in light of an understanding of personal and social change that is based on a sustainable systems approach.

Conceptual Basis of an Integrated Systems Perspective:

The basis of the Systems Approach to Healthy Community is to develop a healthy community by creating a supportive environment that gives participants experiences of self-efficacy in many different contexts. Positively affecting the consumption of nutritious food in any target population involves an intriguing paradox. On one hand, our food selections are among the most personal and intimate choices we can make. For this reason, effective program design must influence the motivations that drive those choices. On the other hand, our food selections are deeply interwoven with our communal activities. Our preparation and consumption of food is an integral part of our families, our friendships and our social identities. Our food choices are an expression of our cultural heritage and our participation in the world through our many roles and environments.

Therefore, an effective program design must also take a systems approach to recognize and affect the many contexts of the individual's wider experience. In the Systems Approach to Healthy Community, two perspectives have been integrated that can meet the unique challenges of positively affecting people's nutritional and lifestyle choices: 1) If a person believes he or she can do something and then experiences success, that person will make changes. 2) If individuals from that target group are given multiple experiences of self-efficacy – that what they do can be successful and make a difference in their own lives and those of others – then the behavior will not only be learned, it will be sustained and become a part of their lifestyles. Both of these perspectives start from assumptions different from those previously described.

The Systems Approach to Healthy Community understands motivation and how to positively affect it based on a model proposed by Albert Bandura. Bandura said a central factor in motivation is a person's expectation of efficacy, an expectation that he or she can successfully execute certain





behaviors to get certain outcomes. Efficacy expectations affect both the initiation and persistence of behavior. In other words, if a person believes he or she can do something and then experiences success, that person will make changes. The relevance of this understanding to changing people's food choices is that they can know a behavior is beneficial, but if they don't believe they can successfully do the behavior it is unlikely it will be initiated or sustained. This is particularly true for target populations in low income neighborhoods with limited access to healthful food. If individuals from that target group are given multiple experiences of self-efficacy – that what they do can be successful and make a difference in their own lives and those of others – then the behavior will not only be learned, it will be sustained and become a part of their lifestyles.

This concept of self-efficacy also must be understood in terms of the context that surrounds the individual – the many networks and groups of which they are a part. Something as socially and culturally complex as food and lifestyle choices cannot be isolated to one person's response in only one setting, which is often the case in the classroom approach of a contained lesson. In the Systems Approach to Healthy Community, the individual is seen as one interdependent part of interacting community networks that include the family, neighborhood, schools, businesses, churches and government agencies, as well as social factors, such as culture and media. Seeing behavioral change and its motivations in terms of multiple interacting systems and levels can lead to powerful choices in program design. Specifically, giving program participants experiences of self-efficacy in as many diverse and varied contexts as possible empowers the individuals and maximizes the opportunities for creating sustainable healthy communities. Participants are given opportunities to experience themselves as successful and capable in many diverse situations – all the way from planting a seed and seeing it grow to sharing their views and personal experiences with government officials. These successful experiences in different contexts and levels guide and change the choices made by the participants. Subsequently, their choices become a foundation for sustainable personal and cultural change.

Two Interacting Systems:

Understanding the Systems Approach to Healthy Community requires an understanding of how two interdependent systems interact. The first of these is the food system itself (Diagram 1). This consists of six components or phases of the journey food takes as it moves through our lives and communities, or as is often said, from seed to plate and beyond. We need to see and teach this “big picture” perspective so people understand all of the economic and social implications of the food choices they make. The LSU AgCenter's decades of research and community involvement are essential for sustaining a healthful food system and for educating our stakeholders about the vital importance of agriculture.

The second system involved in this systems approach is the context of community networks that affects individual program participants. As discussed in the previous section on the conceptual perspectives, it is important to provide participants with empowering experiences of self-efficacy in the multiple settings in which they live. The three levels used in the USDA's Community Nutrition Education Logic Model are an excellent framework for describing these settings – the individual, family and household level; the institution, organization and community level; and the social structure, policies and practices level. The Systems Approach to Healthy Community can be visualized in Diagram 2.

Overall Program Strategy:

The core of the Systems Approach to Healthy Community is the creation of opportunities for participants to have experiences of self-efficacy by learning skills and underlying principles related to the different stages of the food system and

using that understanding to successfully affect the many community networks in which they are involved. Participants learn to understand the food system and how all of their food choices are a part of a much larger picture. They have multiple opportunities for applying their skills and understanding to achieve successful experiences – such as planting, harvesting, sharing recipes with their neighbors and families and advocating for a healthful food system to local officials. All of the knowledge to be acquired and all of the skills to be learned are explained in the context of the food system. And all of the activities and lessons of the program are designed to give participants an immediate experience of empowerment and success – self-efficacy in multiple contexts within a supportive community. The facilitators, volunteers and collaborators learn the skills necessary to provide a supportive community experience that encourages the understanding and skills that are being learned.

The experience of self-efficacy begins with LSU AgCenter extension agents who facilitate system change. The facilitator must understand the food system and his or her role as an advocate for healthy community networks as the crucial link bringing research-based knowledge to those who need it and as a change agent for the community.

The LSU AgCenter facilitator works directly with the target population and creates collaborative networks with other groups – such as neighborhood garden teams, neighborhood associations, church groups, regional farmers, businesses, nonprofit service providers, health professionals, educational institutions and local government bodies. Each of the separate networks has goals that are seen in the context of shared outcomes. The focus on shared outcomes improves collaboration, trust and innovation. The LSU AgCenter facilitator creates multiple opportunities through programs, initiatives and other active experiential learning processes that will give participants experiences of self-efficacy in many different settings – from planting a seed and watching it grow to addressing local policymakers about issues concerning food security. These experiences gradually establish a culture of enthusiasm, empowerment and change.

In all of the programs designed for the participants, one underlying principle is that the activities are ones of cooperation rather than competition. A cooperative focus ensures all participants can experience successes, and it fosters the creation of mutually enhancing relationships that are the foundation of a healthy community.

Initiatives and programs based on the Systems Approach to Healthy Community, such as the FIT for Kids model (Diagram 3), are both sustainable and flexible. First, as individuals see their positive choices having an effect in their own lives and the lives of others, those choices are owned and become a part of their personal lifestyles. Second, participants gain capacity to mentor and guide others, creating a sustainable and transferrable legacy of skills and knowledge that empowers yet others in the community networks. And third, this approach is flexible enough to allow and encourage multiple interconnected neighborhood food system hubs for positively affecting the larger community.

Logic Model:

An introductory logic model for the Systems Approach to Healthy Community is included (Diagram 4). This logic model shows one of the significant differences a systems approach to change can make. Many logic models describe actions primarily connected to short-term goals, mostly related to individual participants acquiring information and knowledge. Measurements of such knowledge acquisition become the indicators of program progress. Outcomes related to new behaviors and real social change are relegated to midterm or long-term possibilities.

The model described in this paper radically changes how outcomes are seen and how activities are designed. By focusing on self-efficacy experiences, participants' behavior and lifestyles are changed as a part of the program activity itself. Youth participants want to eat the collards and okra they have grown themselves

– rather than simply being able to identify a nutrient or food group. They proudly act as guides to their gardens, displaying a sense of identity and ownership that in other models is held as a long-term goal. By bringing interconnected community networks into the program activities, the youth themselves educate their local government officials about food system issues and advocate for community change.

What are usually vague long-term goals are reframed in such a way that they become actual program activities, and success in those activities is reflected in the short-term outcomes. Participants act on the long-term goals of food security and healthy community, to begin with, as part of their successful experience in the program. One example is when participants speak to the city council about their concerns related to food security issues; in that, they are having an immediate effect related to the long-term goals of policy change. Another example is when youth develop a vegetable market in their “food desert” neighborhood that directly addresses the long-term goal of access to healthful food.



Successful Implementation of Pilot Programs:

The Systems Approach to Healthy Community has yielded concrete successes in the Northwest Region of Louisiana. Evaluation results from trainings and participant surveys highlight successes, but the real power of this approach can be seen in the relationships and experiences of participants in many different settings. Younger participants are demonstrating a sense of ownership in their gardens, caring for them and eagerly eating broccoli and Swiss chard. Trained adult volunteer facilitators enthusiastically contribute time and effort toward community events and initiatives. And our larger community is responding to these grass-roots efforts. A local business and a nonprofit organization joined to raise funds in support of the Urban Youth Farmer Program. The mayors and city councils of both Shreveport and Bossier City have signed proclamations emphasizing the importance of food security for our community and for future generations (Diagram 5). What follows is the unfolding strategy currently being used in the Northwest Louisiana Region to implement the Systems Approach to Healthy Community:

The Vision: A ‘Big Picture’ of Regional Food Security

1. Target Outcomes for Food System Issues

- a. Raise awareness about the importance of a healthy regional food system
- b. Have goals for a healthy regional food system included in the newly adopted Shreveport/Caddo Comprehensive Master Plan (Shreveport-Caddo 2030: Great Expectations)

2. Partners/Collaborators

- a. City of Shreveport
- b. Caddo Parish Commission
- c. Slow Foods North Louisiana

- d. Northwest Louisiana Master Gardeners
- e. Red River Coalition of Community Gardeners
- f. Shreveport Green
- g. Shreveport Metropolitan Planning Commission

3. Extension Agent's Role(s)

- a. Member of community advisory group for the master plan
- b. Provide education and advocacy for issues related to the food system
- c. Write goals related to the vision of a healthy food system

4. Extension Agent's Activities

- a. Attend community listening sessions
- b. Attend community advisory group meetings
- c. Form a task force to develop an action plan for implementation of the goals adopted in the Master Plan.

The Initiative: EatWell-LiveLocal Task Force

1. Target Outcomes

- a. Research current state of the regional food system
- b. Outreach to other interested groups
- c. Education and outreach to the public
- d. Identify possible implementation projects
- e. Lay the foundation for developing an interconnected network of neighborhood food system hubs as centers for healthful community activities

2. Partners/Collaborators

- a. City of Shreveport
- b. Bossier City
- c. Caddo Parish Commission
- d. Bossier Parish Police Jury
- e. Bossier Parish Community College
- f. Shreveport Public Assembly and Recreation (SPAR)
- g. Shreveport Green
- h. Slow Foods North Louisiana

3. Extension Agent's Role(s)

- a. Form task force
- b. Facilitate task force meetings
- c. Provide research-based information

4. Task Force Activities

- a. Determine action steps
- b. Host public awareness activities including:
 - i. Mayors' brunch
 - ii. Public event
- c. Write and request support of healthful food system proclamation/resolution.

The Campaign: We Grow Together!

(Conducted by a coalition of collaborators listed below)

1. Target Outcomes

- a. Increase public awareness about the importance of a healthy local food system

- b. Increase the number of people involved in growing produce
- c. Increase number of people involved in preparing food in a healthful manner
- d. Increase access to healthful food for all community members

2. Partners/Collaborators

- a. City of Shreveport
- b. Caddo Parish Commission
- c. Bossier City
- d. Bossier Parish Police Jury
- e. Slow Foods North Louisiana
- f. Northwest Louisiana Master Gardeners
- g. Shreveport Green
- h. Red River Coalition of Community Gardeners (RRCCG)
- i. Community Renewal International
- j. Sutton Mitchell Beebe Babin Architects LLC
- k. LSU Health Sciences Center
- l. Nurse Family Partnership
- m. North Louisiana Area Health Education Center (NLAHEC)
- n. Local businesses
- o. Local producers

3. Extension Agent's Role(s)

- a. Facilitate meetings
- b. Coordinate programming
- c. Offer educational consultation
- d. Deliver programming
- e. Provide research-based information

4. Activities

- a. Educational events
- b. Awareness campaign including signage
- c. Neighborhood food gatherings

The Community Network: Red River Coalition of Community Gardeners (RRCCG)

1. Target Outcomes

- a. Provide information and support for youth and community gardeners
- b. Establish a network of trained volunteers who can assist others in the installation and maintenance of vegetable gardens

2. Partners/Collaborators

- a. Highland Center – Volunteers of America
- b. Northwest Louisiana Master Gardeners
- c. Shreveport Public Assembly and Recreation (SPAR)

3. Extension Agent's Role(s)

- a. Provide ongoing support and education
- b. Assist in establishment of nonprofit status
- c. Serve as consultant to the board of directors

4. Activities

- a. Monthly meetings
- b. Ongoing support for youth and community gardens

- c. Ongoing support for growing communities
- d. Advocate for a healthful food system

The Model: FIT (Food Initiative Task Force) for Kids, composed of the following programs:

FIT for Kids (After-school Program and Summer Program)

1. Target Outcomes

- a. Youth learn how to grow produce
- b. Youth learn how to prepare vegetables in a healthful manner
- c. Youth learn about the food system and local food system challenges
- d. Youth learn how to advocate for a healthy food system

2. Partners/Collaborators

- a. Shreveport Public Assembly and Recreation (SPAR)
- b. Northwest Louisiana Master Gardeners
- c. Red River Coalition of Community Gardeners (RRCCG)

3. Extension Agent's Role(s)

- a. Program development
- b. Program delivery
- c. Staff and volunteer training

4. Program Activities

- a. Gardening
- b. Cooking
- c. Communication
- d. Team-building
- e. Advocacy

Urban Youth Farmers

1. Target Outcomes

- a. Youth learn how to grow large quantities of produce
- b. Youth learn entrepreneurial skills

2. Partners/Collaborators

- a. Shreveport Public Assembly and Recreation (SPAR)
- b. Wine Country Bistro
- c. Slow Foods North Louisiana

3. Extension Agent's Role(s)

- a. Program development
- b. Program support
- c. Ongoing education

4. Activities

- a. Grow summer produce
- b. Establish and maintain a weekly neighborhood vegetable market
- c. Sell produce to local restaurants
- d. Mentor younger children
- e. Provide gardening and food preparation instruction to other interested youth

Veggie of the Month

1. Target Outcomes

- a. Participants learn components of the food system
- b. Participants gain experience in the different components of the food system
- c. Participants learn to prepare healthful recipes with seasonal produce

2. Partners/Collaborators

- a. Shreveport Public Assembly and Recreation (SPAR)
- b. Slow Foods North Louisiana
- c. Community Renewal International
- d. LSU Health Sciences Center
- e. Nurse Family Partnership
- f. North Louisiana Health Education Center (NLAHEC)
- g. Sutton Mitchell Beebe Babin Architects LLC
- h. Red River Coalition of Community Gardeners

3. Extension Agent's Role(s)

- a. Program development
- b. Program support
- c. Providing training for volunteers

4. Activities

- a. Harvesting from garden
- b. Processing fresh produce for consumption
- c. Preparing healthful recipes
- d. Taste-testing recipes

Volunteer/Mentor Training

1. Target Outcomes

- a. Participants will learn about:
 - The food system
 - Sustainable vegetable gardening
 - Community garden leadership and facilitation skills
 - My Plate recommendations
- b. Participants will meet community gardeners and join a garden team
- c. Participants will learn principles and skills to provide supportive community in different settings

2. Partners/Collaborators

- a. Northwest Louisiana Master Gardeners
- b. RRCCG
- c. SPAR

3. Extension Agent's Role(s)

- a. Program development
- b. Program delivery
- c. Ongoing volunteer development and support

4. Activities

- a. Classroom lessons
- b. Hands-on gardening
- c. Team building exercises

Implications and Recommendations:

The positive results obtained in the pilot programs are not limited to the particular circumstances of this region. The Systems Approach to Healthy Community, which is aimed at creating experiences of self-efficacy within a supportive community, has the possibility of making significant and sustainable changes in any community. I believe a systems approach that focuses on experiences of the importance of agriculture within a supportive community can be instituted in any parish or region of our state.

Summary: A Food System Scenario for the LSU AgCenter

The LSU AgCenter is uniquely positioned to take an active leadership role in our communities in addressing the issues of food access and healthy community. A multidisciplinary, collaborative systems approach can be highly effective, and successful pilot programs using this approach are being implemented in the Northwest Region of Louisiana.

This approach can be expanded. Extension agents and researchers are already doing things that can richly contribute to an integrated systems approach to community health. Their roles as educators of youth, families and farmers are vital in a comprehensive healthy community initiative. Extension agents also are well positioned to facilitate the development of community networks. Experiment stations can be training places for urban agriculture, volunteer initiatives and public awareness campaigns.

The FIT for Kids model can be expanded to meet the needs of other locations and target audiences. Because this model can be flexibly replicated, mutually supporting neighborhood food system hubs can be created that can integrate numerous neighborhood initiatives and projects.

The Systems Approach to Healthy Community programming does not require drastic change in present program resources, and it aligns well with both the explicit nutrition education goals formulated by the USDA and the mission of the LSU AgCenter. The Extension Service already is our country's primary resource for research-based knowledge and best practices for our food system.

References:

- Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
- Bronfenbrenner, U. (1977, July). Toward an experimental ecology of human development. *American Psychologist*, July 1977, 513-531.

Diagram 1

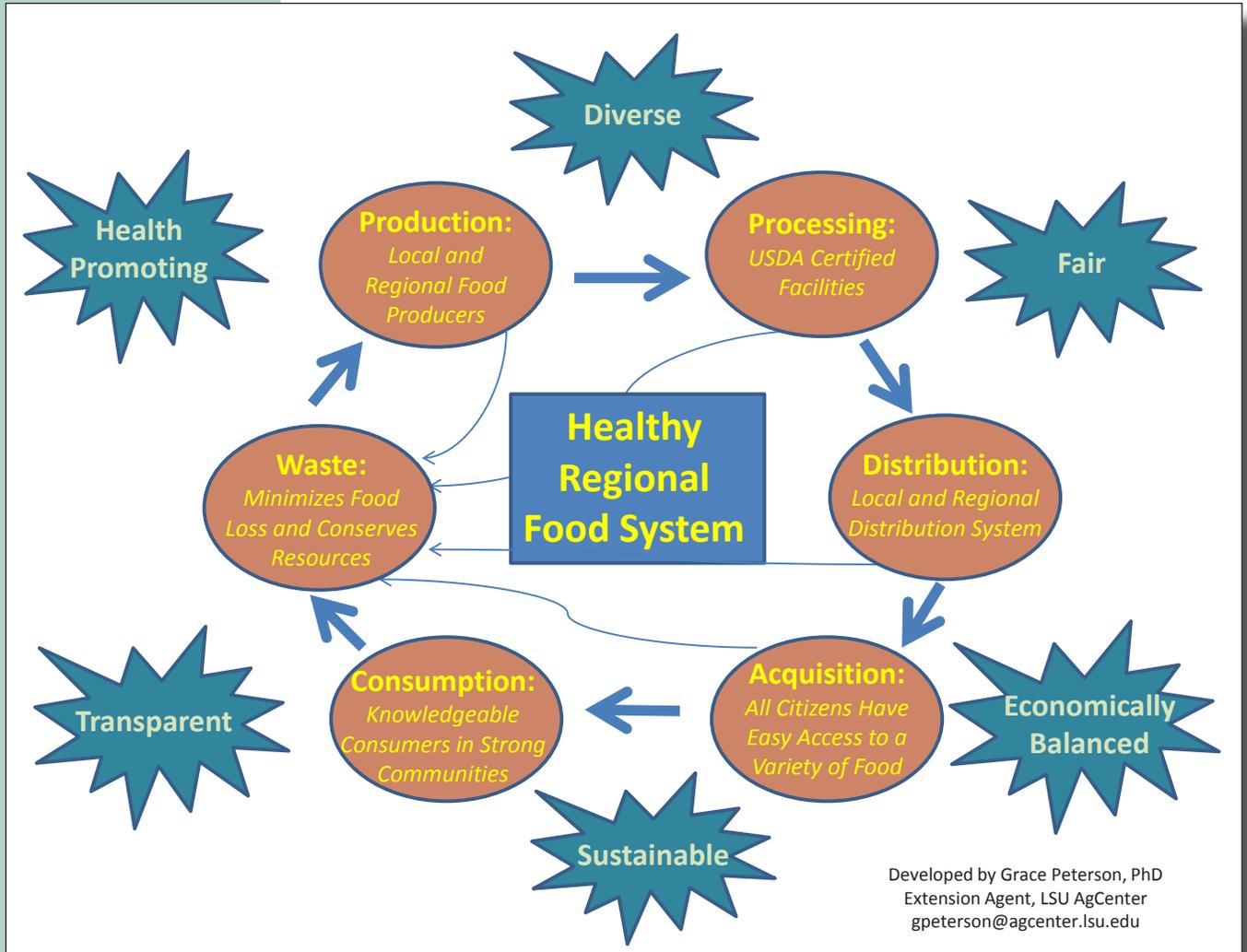
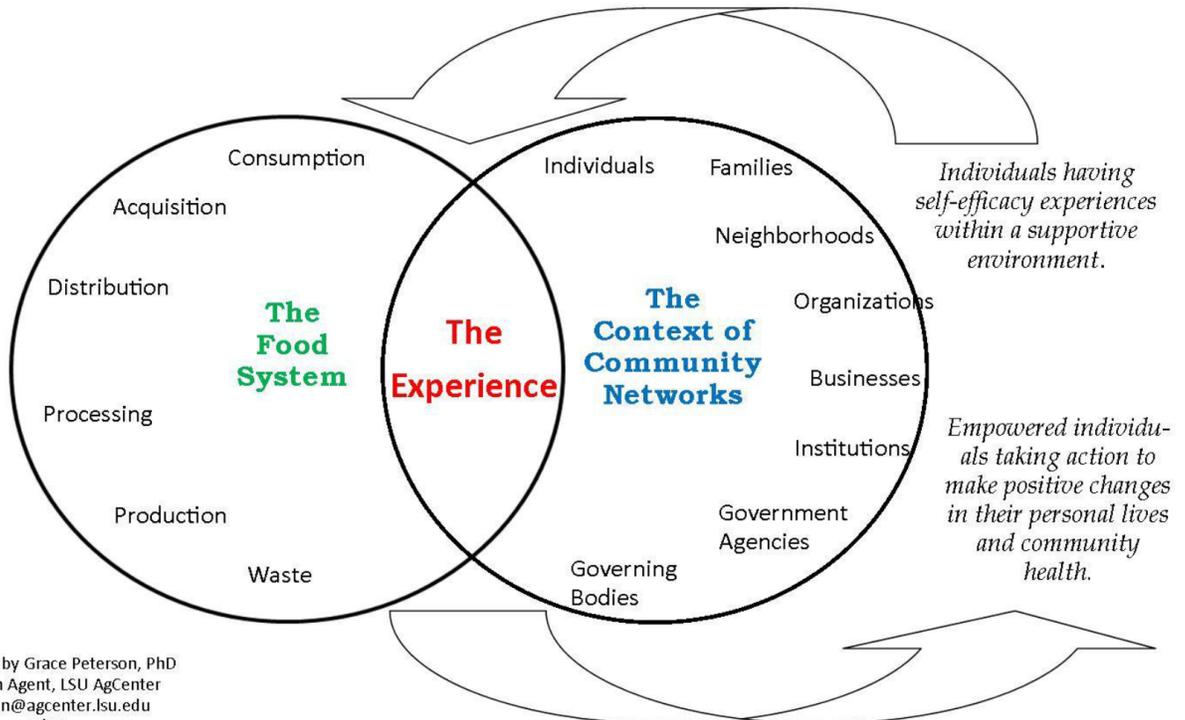


Diagram 2

The Systems Approach to Healthy Community

All program experiences relate to two intersecting systems: The Food System and The Context of Community Networks. Individuals are engaged in “The Experience” where they gain skills and knowledge about the Food System (growing produce, food preparation, understanding “food deserts”, etc.) Participants learn the skills and knowledge within The Context of Community Networks in which they feel empowered to make changes.



Developed by Grace Peterson, PhD
Extension Agent, LSU AgCenter
Gpterson@agcenter.lsu.edu
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Diagram 3

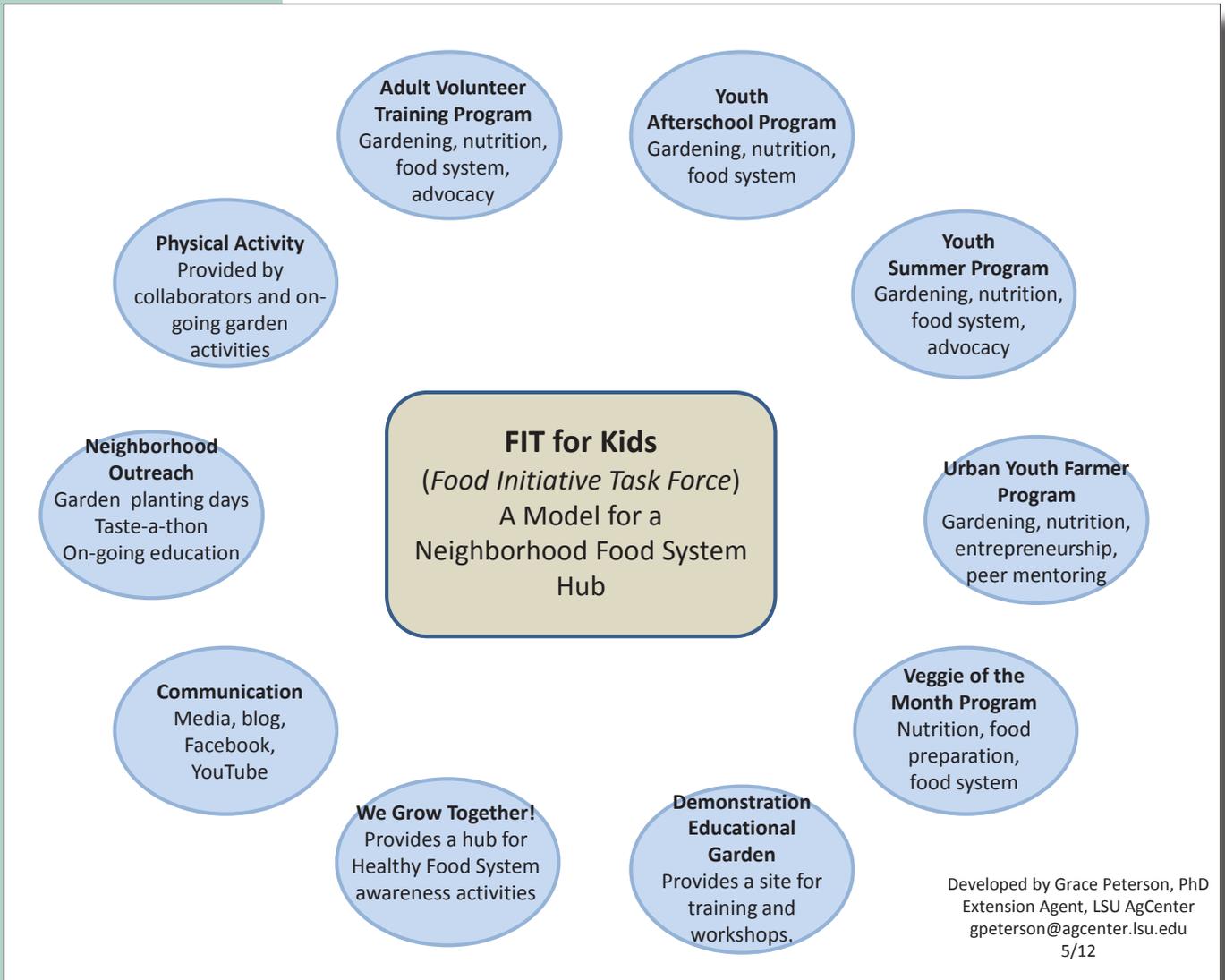


Diagram 4

The Systems Approach to Healthy Community Logic Model			
Inputs	Target Individuals	Activities	Outcomes
<p><i>Resources and Collaborators</i></p> <p>LSU AgCenter staff</p> <p>Planning processes</p> <p>Integrated efforts with collaborative partners</p>	<p><i>People who are involved in program activities in various capacities.</i></p> <p>Family members</p> <p>Neighborhood leaders</p> <p>Church leaders</p> <p>Educators</p> <p>Nonprofit staff members</p> <p>Government agency staff members</p> <p>Policymakers</p>	<p><i>Self-efficacy experiences within supportive environments.</i></p> <p>Individuals participate in activities that are designed to give opportunities for self-efficacy within supportive networks.</p> <p>Activities can include gardening, cooking, training, visioning, strategic planning, hosting events, attending policymaker meetings, etc.</p> <p>Program staff and volunteers are trained to interact with participants in a way that promotes self-efficacy. Staff and volunteers create “supportive community” in learning environments.</p>	<p><i>Skills and knowledge acquired by target individuals and the effects they have on themselves and their community networks.</i></p> <p>Individual participants will gain skills and knowledge to support healthy lifestyles. They will experience self-empowerment through their successes and facilitate change in their community networks through teaching, advocating, presenting and leadership.</p>





CEDRIC B. GLOVER
MAYOR
CITY OF SHREVEPORT, LOUISIANA



LORENZ "LO" WALKER
MAYOR
CITY OF BOSSIER CITY, LOUISIANA

OFFICES OF THE MAYORS

PROCLAMATION

WHEREAS, the Food System significantly affect the public health, economy, land use, and quality of life of our citizens; and

WHEREAS, locally grown food is healthier for our community and is environmentally sustainable to increase nutrition; and

WHEREAS, there are communities in our region that are considered "food deserts" with little or no access to fresh, affordable, and healthy food- it is estimated that 1 in 3 people in our community are food insecure, and more than 1 in 5 families with children are food insecure; and

WHEREAS, food-related health concerns are a major challenge for our communities and consumption of healthy food reduces nutrition-related illnesses such as diabetes, obesity, and heart disease; and

WHEREAS, cultivating local farm and food businesses creates green industry jobs, reduces health care costs, and contributes to our long-term economic prosperity; and

WHEREAS, we wish to bequeath to our future generations a healthy world with healthy choices;

NOW, THEREFORE, WE, CEDRIC B. GLOVER, MAYOR of the City of Shreveport, and LO WALKER, Mayor of City of Bossier City do hereby proclaim the month of March as:

"EAT WELL-LIVE LOCAL MONTH"

In the Cities of Shreveport and Bossier City, and urge all citizens to join as we celebrate this special week.

IN WITNESS WHEREOF, we have hereunto set our hands and caused the Seals of the City of Shreveport and the City of Bossier City to be affixed.



C.B.G.
CEDRIC B. GLOVER
MAYOR

Lorenz Walker
LORENZ WALKER
MAYOR





Author

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