

## The Urban Nutrition Initiative: Bringing Academically-Based Community Service to the University of Pennsylvania's Department of Anthropology

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*The Urban Nutrition Initiative (UNI) is a University of Pennsylvania/West Philadelphia schools academically-based community service program that integrates academics, research, and service through service-learning and participatory action research. UNI is based academically within Penn's Department of Anthropology and administratively within the Center for Community Partnerships. University and school student learning is based upon problem-solving, with theory and methods utilized from across the disciplines. As active learners, students generate knowledge through engagement with the community, which can then be applied as appropriate to other situations. UNI focuses on nutrition-related diseases, including obesity, that constitute an epidemic in the United States, especially among disadvantaged minorities, and contribute to prevalent health disparities. Student research has demonstrated UNI has positive impacts on schoolchildren's diets and Penn students' educational experiences.*

Academically-based community service (ABCS) is an extension of service-learning directed at the structurally-based inequalities that afflict societies. While retaining the basic components of service-learning—self-discovery, reflection, and values clarification—ABCS integrates them with academics and research into a problem-solving initiative that enriches the curriculum and contributes to transforming neighborhoods and communities.

The organizing principle of ABCS is problem-solving learning, with a focus on problems that are immediate, compelling, and real-world, expressed as “how can we accomplish so-and-so?” Learning is active, students are engaged, and members of the class become producers—rather than merely consumers—of knowledge.

Why does ABCS fit so well into anthropology as a discipline? First, anthropology is about people in their own worlds, the problems they face, and the meanings they ascribe to those experiences. Traditionally, anthropology has been about engagement, collaboration, and participation. Franz Boas (1911; 1940) and Margaret Mead (1930, 1933), two of the great leaders and shapers of the social sciences in general and American anthropology in particular, are excellent examples. Boas dealt with arguably the greatest problem ever to face humanity: how to solve the problems associated with human diversity, marginality, disparity, and racism. Mead's concerns were with the problem of sex differences and how to help societies deal with the attendant

behavior within specific cultural contexts.

Second, anthropology is holistic and comprehensive in its view of humanness, synthetic rather than reductionist in its scholarship, and engaged and participatory rather than detached and formal in its research procedures. And third, by virtue of these characteristics, anthropologists often enter into reciprocal relationships with individuals with whom they work that include mutual problem solving, knowledge sharing, and serving each other's needs.

This article describes and discusses the Urban Nutrition Initiative (UNI), an ABCS program that is a joint initiative of the University of Pennsylvania's Center for Community Partnerships and Department of Anthropology, in partnership with university-assisted community schools in West Philadelphia. The article discusses the history, structure, and impacts of UNI, and suggests how it may serve as a general model for community and educational change.

### The Urban Nutrition Initiative

#### *History*

The Urban Nutrition Initiative developed from an undergraduate service-learning course (Anthropology 310) first offered in 1990. The original title, *Anthropology and Biomedical Science*, was changed subsequently to *Nutrition, Health, and Community Schools*. From its inception until 1994 University students taking the course worked on nutrition-related issues at the John B. Turner Middle School: 1)

developing and teaching a nutrition and health curriculum in collaboration with regular teachers, 2) carrying out needs and formative research on nutrient intake, diet quality, and the prevalence of overweight and obesity, and 3) participating in a variety of after-school formal and nonformal projects. The research findings generated have been reported in peer-reviewed journals, books, and one Ph.D. dissertation (Gordon-Larsen, 1997; Gordon-Larsen, Zemel, & Johnston, 1997; Johnston & Hallock, 1994).

*Problem Definition: Nutritional Needs in West Philadelphia*

The problem that Anthropology 310 students dealt with from the inception of the course, and that remains the focus of UNI today, is that of nutrition-related health disparities. Without question, the obesity epidemic is one of the major public health problems facing virtually all countries of the world. In the United States, the prevalence of overweight and obesity in children and youth has more than doubled since the 1970s (e.g., Ogden, Flegal, Carroll, Johnson, 2002), with the greatest increases among minority groups. While we tend to associate such increases with developed nations, there are parallel trends in the lesser developed economies (Peña & Bacallao, 2002).

As part of their undergraduate course work and graduate study, Penn students working with the Urban Nutrition Initiative have helped to frame the problem by conducting needs assessments of West Philadelphia schoolchildren’s nutritional status and dietary adequacy. The prevalence of obesity in this community is high, and has increased threefold from the 1970s to the 1990s (Gordon-Larsen, Zemel, & Johnston, 1997). Table 1 presents the percentage of obesity among school students in the 1990s, measured by Penn participants in the Urban Nutrition Initiative.

Overweight and obesity are not only major public health problems in the disadvantaged community around the University of Pennsylvania. They are also indicators of a spectrum of other nutrition-related diseases, e.g., type-II diabetes, hypertension, cardiovascular disease, and arthritis. The

increases in nutrition-related diseases are the result of environmental factors, diet, and exercise. In particular, the obesity epidemic is based in the increase in caloric intake, composition of calories ingested, and reduction in energy expenditure (Johnston & Foster, 2001).

As part of their ABCS coursework, Penn students have assessed West Philadelphia schoolchildren’s diets, aged 10-16 years. The Penn students analyzed 24-hour recalls of food intake (see Johnston & Hallock, 1994, and Gordon-Larsen, 1997, for more detail). The results indicate the following:

- High fat intake in general, and saturated fat in particular
- Low intake of calcium, vitamin D, iron, and zinc
- High consumption of unhealthy snacks, especially after school

Related to these dietary risk factors is the finding that obese teenagers watched significantly more television and engaged in less activity than their non-obese age peers (Gordon-Larsen).

In summary, the assessment by Penn ABCS students of the West Philadelphia children’s nutritional status reveals the same problems identified in similar communities throughout the United States: diets high in calories relative to need and deficient in many nutrients necessary to maintain health and wellness. The most obvious consequence is the striking increase in obesity and overweight, among children in their early years of elementary school. A set of related consequences involves specific nutrient deficiencies that place the community youth at risk of chronic disease during adult years. The remainder of this article focuses on the Urban Nutrition Initiative, a comprehensive school-based ABCS initiative designed to change the behaviors responsible for, and enhance the nutrition and health status of, the community.

*The Structure of the Urban Nutrition Initiative*

All activities carried out by students as part of the Urban Nutrition Initiative have been characterized by the following attributes:

- Collaboration among all participants through the auspices of university-assisted community schools functioning as centers of education, services, engagement, and activity for the public school students, their families, and community members
- Academically-based community service as the organizing principle
- A problem-solving focus on improving com-

Table 1  
*Percentage Obesity in the 1990s among 396 West Philadelphia School Students*

Age Group	Percentage
5-8	12.8
11	23.8
12	17.1
13	27.6
14	36.7

munity nutritional and health status

- The integration of in- and out-of-class activities
- An emphasis on the creation of knowledge by school and university students with participatory action research as the core methodology.

In spring 1995, Penn undergraduates enrolled in Anthropology 310 and Turner Middle School students designed and implemented “Fruits ‘R Us (and Vegetables, Too),” a student-operated fruit and vegetable stand seeking to improve diets through increasing knowledge and consumption of healthy foods. The “fruit stand” was operated after school and on weekends for students, staff, parents, and members of the community, and represented a major step in the Urban Nutrition Initiative’s development. While retaining the classroom as the hub of its operation, the Urban Nutrition Initiative began the process of linking the class to external activities in an integrated curriculum of health promotion designed to change behavior and improve community nutrition and health status.

Over the years, the Urban Nutrition Initiative has evolved into a multifaceted program that connects the university with elementary, middle, and high school curricula in West Philadelphia, through service-learning and participatory action research, creating a pre-K through 16+ curriculum. However its purpose has remained the same:

- To create and sustain a curriculum focusing on improving community health and increasing educational skills and abilities
- To work with university faculty, public school teachers, and community residents to engage students as agents of school and community change

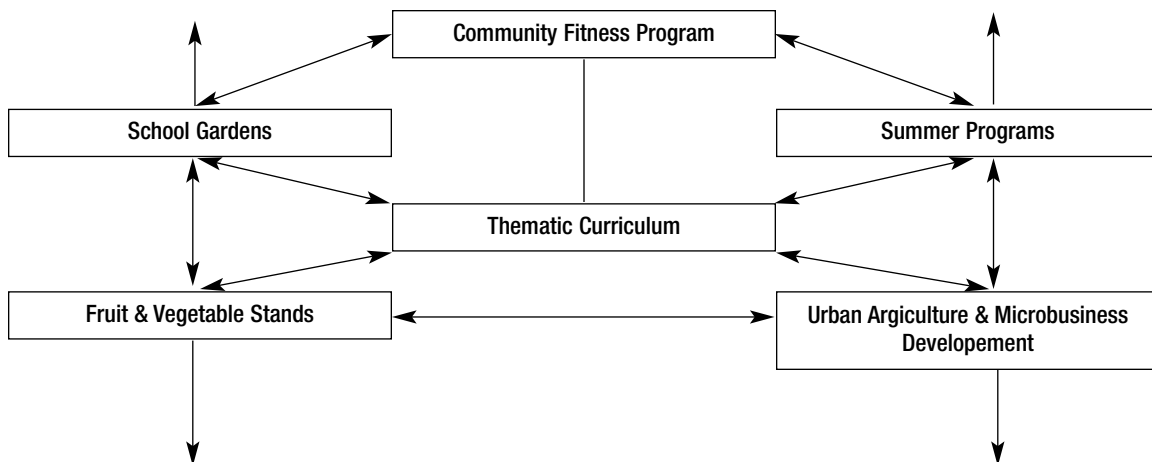
- To increase students’ sense of control over their lives and futures by focusing on healthy lifestyles
- To improve the nutritional and health status of school students, their families, and the local community.

UNI is focused on researching and developing integrated, curriculum-focused approaches that will create substantial and broad community participation. Accordingly, a thematic curriculum is at the core of UNI’s school-based school and community improvement approach. UNI has developed and implemented a curriculum that teaches core subjects (math, social studies, language arts) through the following activities:

- School gardens maintained by students as part of their studies
- Afterschool fruit and vegetable stands that sell to school students, staff, parents, and other community members
- Urban agriculture and microbusiness development for high school students
- Farmers’ market open on weekends with a winter buying club in the off-season
- Free community fitness program for parents and community members
- A range of summer programs linking students to wider nutritional concerns and the University of Pennsylvania.

These activities are indicated schematically in Figure 1. The arrows that point beyond the diagram indicate activities that reach outside of the diagram itself. For example, a farmer’s market collaborative, marketing produce to area restaurants, com-

Figure 1  
*The Urban Nutrition Initiative*



munity cooking classes in a local church, food preparation for commercial sale, etc. are all activities carried out jointly by Penn and school students working with University and school faculty and staff, as part of their course work.

UNI promotes effective citizenry among youth by engaging high school and college students in a complete spectrum of problem-solving activities, including opportunities for advocacy work focused on addressing the nutritional crisis in urban America. By linking community-problem solving activities to the curriculum of public schools and the University of Pennsylvania, UNI integrates civic participation into educational institutions' core mission. This strategy is effective because engaging K-16+ learners in hands-on approaches to improve nutritional status and community health in West Philadelphia improves the quality of the educational experience. In active learning situations students apply knowledge and understand the relevance of theories as they are put into practice.

Penn students—largely undergraduates—participate in UNI through their ABCS courses in departments and programs such as Anthropology, Health and Society, Nursing, Urban Studies, and Political Science. The courses employ a problem-solving format in areas such as community health, food security, obesity, and the politics of food. Many students continue their interests in other ABCS courses leading to an ABCS minor, currently being developed in a number of departments. Students also continue their involvement with UNI through volunteering, as part-time employees, and in independent study and senior and Master's theses. Finally, through the generosity of private donors, a minimum of eight undergraduates are appointed annually as Fellows to assist UNI in various ways. These include being paired with elementary and high school teachers to develop lesson plans employing nutrition and gardening themes, working with students and their families as life guards, aerobics and yoga instructors at Community Fitness Night, and coordinating courses for adults in nutrition-related topics, e.g., cooking.

### Research and Evaluation

Rooted primarily within Penn's Department of Anthropology, the Urban Nutrition Initiative is a community-based, ABCS program seeking to enhance the West Philadelphia community's (including the University of Pennsylvania's) nutrition and health status. It also seeks to enhance learning by impacting University teaching and the University-assisted community schools with which it works. Finally, the Urban Nutrition Initiative seeks to develop a model that can be extrapolated, with appropriate modifications, to other settings nationally and internationally. As a consequence, a

basic component of its activities is involved with research and evaluation.

The nutritional concerns that the Urban Nutrition Initiative engages meet the criteria of "ill-defined problems" as described by Gallagher (1997):

- More information than is initially available is needed to understand the problem and decide what actions are required for resolution
- No single formula exists for conducting an investigation to resolve the problem
- As new information is obtained, the problem changes
- One can never be sure the "right" decision has been made

Such problems cannot be solved by conventional research methods rooted in hypothesis-based designs that attempt to apply laboratory methods to real-world problems. All-too-often, the results are simply descriptive of the *status quo*. Kurt Lewin, the father of action research, called for a different approach when dealing with complex social issues. In his work with the American Jewish Congress on minority problems, ethnocultural conflict, and discriminatory practices, for example, Lewin declared that we aim at "no action without research; no research without action" (quoted in Marrow, 1969, p. 193).

Anthropology is especially suited to deal with ill-defined problems. The characteristics noted above—comprehensive, holistic, reflective, participatory, and engaged—all contribute to an approach in which problems are seen in their real-world complexity, scholarship is engaged, and research is conducted within a framework of participation.

The Urban Nutrition Initiative has approached the obesity problem in West Philadelphia as one component of a spectrum of nutrition-related conditions and diseases, with UNI designed within the framework of health promotion and disease prevention. Rather than using a disease outcome, we have focused on prevention, changing the behaviors responsible for overweight, obesity, and other nutrition-related diseases.

The research model the Urban Nutrition Initiative utilizes is that of participatory action research (PAR), a process for generating knowledge about a specific problem that brings together all stakeholders into a joint process aimed at meeting both research and intervention objectives (Benson, Harkavy, & Puckett, 1996; Israel, Schurman, & Hugentobler, 1992). In addition to being problem-driven, PAR is characterized as being collaborative (rather than expert-driven), cyclical (rather than linear), engaged (rather than detached), and reflective (rather than objective). With respect to the Urban Nutrition Initiative, the

result is not a set of traditional research projects but an ongoing partnership in which questions arise out of the mutual engagement of all parties and are answered through the collection and analysis of pertinent data.

### *Impacts of the UNI on School Children*

The role of participatory action research as the research strategy of the Urban Nutrition Initiative is seen in the impact of UNI on schoolchildren. These impacts have been described through projects carried out by Penn students. Griffin (2000) compared attitudes of 8th grade students toward gardening from two elementary schools—a Urban Nutrition Initiative school and a control school in the same neighborhood. He found that the students involved in gardening as part of the Urban Nutrition Initiative exhibited greater beliefs in themselves to “make a difference,” most often expressed as improving the neighborhood. They also exhibited more positive attitudes toward gardening than control schoolchildren.

Student-generated research has also shown changes in afterschool snacking due to the fruit and vegetable stand. When compared to other days in the school week, on the day following the school store’s open hours the consumption of fruits almost doubled (39% to 68%) while vegetables almost tripled (13 to 38%). But regardless of when recorded, the snacks of children of the UNI school were healthier than those of the control school. This indicates the fruit and vegetable stand had a positive effect on children’s diets, not just the day after it was open, but throughout the school week as well.

Another study has examined the Urban Nutrition Initiative’s impact on parents of the schoolchildren. Schwartz (2000) surveyed 93 parents regarding knowledge about and attitudes toward the afterschool fruit stand. In conjunction with the students, Schwartz also hosted a table during report card conferences where parents were given literature, invited to taste healthy snacks, and asked further questions. The study’s goals were to:

1. gauge the extent of parental participation in the fruit stand
2. examine its effects on the school community
3. make recommendations for changes

When compared to children who were not involved in UNI activities, Schwartz found that involved children were significantly more likely to make at least one purchase from the stand and their parents were more likely to know about the fruit stand itself. She also demonstrated the importance of child-to-parent communication as the primary pathway for learning about the stand. For the

involved children, 76% of the parents learned about the stand from their children, while 66% had seen the stand when they came to the school. For parents of non-involved children the figures were lower: 33% and 35% respectively.

Interviews with high school students and experiences with them suggest they have discovered their own agency and were exercising it as they have been developing their own analysis about the political economy of food—recognizing that the school itself (like the commercials that they are bombarded with)—was pushing them to unhealthy food choices. In addition, students involved in school gardens and stores demonstrate a willingness to try new and strange foods, even if they don’t incorporate them into their diets.

### *Impacts of UNI on University Students*

Academically-based community service at the University of Pennsylvania has been shown to be a successful strategy for enhancing learning and increasing social responsibility and civic engagement (Eng, 2001; Johnston & Weinrab, 2002). UNI students were part of the quantitative and qualitative data bases analyzed in the research described in these reports. But UNI students have benefited additionally from their participation, in the following areas:

*Continuity and involvement.* The majority of community-based service-learning experiences are part of courses offered by individual faculty. These courses typically meet for three hours/week over a single (maybe two) semester(s). On the other hand, UNI is a community-based program linked to a set of courses, mostly in anthropology, but in other departments and majors as well (e.g., Urban Studies, Health and Society, Nursing). Students have the option—exercised by about 50 at any one time—of working with UNI at other times, many throughout the calendar year. Observations, interviews, and case studies of students clearly indicate that this level of involvement provides a “theme” for their studies at Penn, a theme that carries over into their post-university years.

*Career goals and civic engagement.* Mei is a Penn student who was drawn into ABCS through her work in the Urban Nutrition Initiative. A joint major in Environmental Studies and the Biological Basis of Behavior, when introduced to the dramatic health disparities of the West Philadelphia community, she dedicated herself to finding ways to bridge the divide between this community’s needs and the resources at the University of Pennsylvania. Through her involvement, she and a fellow ABCS student developed the proposal for the Sayre-Beacon Program, a school-based school and community

health promotion and disease prevention initiative at the Sayre High School in West Philadelphia, and the incorporation of the Urban Nutrition Initiative as a key learning method for both Penn and Sayre students. The Sayre program is now a major ABCS project of the University, with more than six schools of the university—including Arts & Sciences, Medicine, Dentistry, Nursing, Social Work, and Education—participating.

Marty is a Chemistry major and Rhodes Scholar finalist who took an ABCS/UNI course. He was drawn to take another and to participate outside of class in Urban Nutrition Initiative activities. He has helped design the evaluation for the Sayre project. Marty has been admitted to an Ivy League medical school and plans to incorporate his nutrition and community health experiences into his medical education.

*Anthropology-based education.* The Urban Nutrition Initiative's problem-solving/service-learning focus provides a framework for making sense out of anthropology as a discipline. One of the challenges for anthropologists is to integrate the many parts of the discipline and construct a framework for scholarship from the many methodologies that are employed. Urban Nutrition Initiative students regularly report that their analytic skills are sharpened and their conceptual senses deepened by their Urban Nutrition Initiative experiences. As one student remarked: "now I see what I've been doing the last two years." Others comment favorably on the active learning of the Urban Nutrition Initiative, as opposed to lectures, readings, and "arm chair" approaches to human diversity, as they have gone on to graduate school or to public sector jobs.

## Discussion

This article describes the Urban Nutrition Initiative, a project that employs the principles of academically-based community service to achieve its goals. As such, UNI contributes both to the enhancement of the nutritional status of the West Philadelphia population and of the educational experiences of school and university students, achieving these goals by the integration of teaching, research, and service. It is the integration of these components—traditionally isolated from each other—that gives ABCS its power as a learning tool and its promise as an intervention method.

The nutritional problems confronted by UNI, as noted above, are difficult to solve, to say the least. The steady growth of an obesity epidemic has occurred despite billions of dollars spent attempting to reverse it. This must rank as one of the great public health failures in history, reflecting the complexity of the problem and the ways in which it is embedded within contemporary culture and social

structure (Johnston & Foster, 2001). The Urban Nutrition Initiative represents an innovative approach to the problem, emphasizing partnership, engagement, participation, and community-based problem solving as the pathways to promoting healthy behaviors. The integration of endogenous and exogenous knowledge, the utilization of a range of methods, and above all, a focus on improving individual lives are its hallmark.

UNI also seeks to improve the educational process through a focus on problem solving, active learning, and student engagement in those real world issues that constrain human potential. Its focus on a specific problem cuts across the various fields of knowledge and breaks down the fortress mentality that tends to characterize discipline-based training today. The research done by undergraduates as part of their classes cannot be underestimated as a major contributor to their learning.

The Urban Nutrition Initiative's impacts on nutritional well-being and student learning have been described above. Contrary to conventional wisdom, school students who are full participants in the Urban Nutrition Initiative activities will eat healthy snacks instead of unhealthy ones. This model—engagement, participation, problem-solving, and service-oriented—can be applied to a range of other issues that confront our society.

Finally, the Urban Nutrition Initiative is an example of how ABCS can be brought into the core curriculum of anthropology (as well as other disciplines and areas of study). The history of anthropology has been one of engagement with local peoples and involvement in their problems. The position of anthropology in the social sciences can be attributed in large part to its success in understanding the collective without losing sight of the individual, and in illustrating how seemingly exotic behaviors significantly inform our interpretation of our own behavior. The Urban Nutrition Initiative is one example of the anthropological perspective at work. It is biocultural, weaving together nutrition and behavior within social, cultural, and historic contexts. It is problem-oriented with students learning about real-world problems that demand a broad theoretical and methodological rigor to solve them, and it is about anthropologists as citizens, bringing their backgrounds to bear on the issues that affect society as part of the process of learning.

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