



# Journal of Youth Development

Volume 1, No. 2 – 2006

**Bridging Research and Practice**



### Editor's Comments:

I am pleased to present the second issue of *Journal of Youth Development ~ Bridging Research and Practice*. This exciting, new, multidisciplinary applied research and practice journal has been designed to enhance the knowledge base of youth professionals as well as clientele. The publication format includes the following components:

- Original research
- Best practices in youth development programming
- Innovative research and evaluation methods
- Strategies and resource reviews

The support, vision and inspiration of the journal's editorial board is greatly appreciated as we progress with this new venture.

### Editorial Board Members

**Mary Arnold**

Oregon State University

**Kirk Astroth**

Montana State University

**Dale Blyth**

University of Minnesota

**Lynne Borden**

University of Arizona

**Ken Culp**

University of Kentucky

**Patricia Dawson**

Oregon State University

**Joseph L. Donaldson**

University of Tennessee Extension

**Michelle Gambone**

Youth Development Strategies, Inc.

**Patricia Dawson, Editor**

[patricia.dawson@oregonstate.edu](mailto:patricia.dawson@oregonstate.edu)

**Suzanne LeMenestrel**

National 4-H Headquarters  
CSREES, USDA

**Richard Lerner**

Tufts University

**Heather Johnston Nicholson**

Girls Incorporated Organization

**Barbara Sugland**

Center for Applied Research &  
Technical Assistance

**Todd Williams**

Texas A & M

**Nicole Yohalem**

Forum for Youth Investment



**Volume 1, Number 2**  
**September 2006**

## **Contents**

### **Feature Articles**

#### **Integrating Youth into Community Development: Implications for Policy Planning and Program Evaluation [Article 0602FA001]**

*Barnett, Rosemary V.; Brennan, M.A.*

As non-profits, volunteer groups, and nongovernmental organizations take on increasingly larger roles in contributing to local well-being, the active collaboration between youth and adults is vital to the long-term success of community development efforts. Similarly, as service activities become standardized components of high-school programs, youth are empowered to becoming long-term contributors to local development efforts. Through this process youth engage in shared citizenship, leading to greater investment in their communities. This research was based on the premise that youth, acting as central parts of the community development process, have the capacity to improve local well-being. It reflects input from 12 key informants and 418 youth who participated in a survey conducted on the development issues contributing to their involvement. The findings of this study provide insights into the factors most directly shaping youth attitudes and involvement in their communities, as well as presenting direct implications for applied use.

#### **Qualitative and Quantitative Assessments of Thriving and Contribution in Early Adolescence: Findings from the 4-H Study of Positive Youth Development [Article 0602FA002]**

*Alberts, Amy Eva; Christiansen, Elise DiDenti; Chase, Paul; Naudeau, Sophie; Phelps, Erin; Lerner, Richard M.*

Research and practice in youth development converge in an interest in positive development, or thriving. They converge also in seeking to promote among youth an orientation to act in support of their own and others' well-being through contributions to self, family, and community. Based on the results of both qualitative (open and axial coding of parents' and students' answers to several open-ended questions) and quantitative analyses of data from Wave 2 (Sixth Grade; 2003-2004) of the 4-H Study of Positive Youth Development (PYD), we found that adolescents and parents define a thriving youth in different ways and, as well, that the groups differ in the salience of contribution as part of their respective conceptions of thriving. We discuss the implications for research and practice of the two generational groups' contrasting views of thriving and contribution.

## **Relationships Matter: A Mixed-Methods Evaluation of Youth and Adults Working Together as Partners [Article 0602FA003]**

*Jones, Kenneth R.*

Highlights of a multi-method research study conducted to understand the perceptions and experiences of youth and adults working together within communities are shared in this article. The results revealed that the most positive youth-adult relationship experiences were those with supportive adults willing to share power with youth, those instituting youth-led endeavors where young people were allowed to demonstrate high levels of involvement and responsibility, and those involving participants who had previously worked as a community partner. Participants in Youth-Led Collaborations were more positive toward their experiences than those in Adult-Led Collaborations and Youth-Adult Partnerships. Also, participants in relationships located in rural areas indicated more positive experiences than those in urban areas. In addition, the critical elements of various youth-adult relationships were also underscored, thus identifying characteristics that have significant importance in nurturing interactions between young people and positive adults.

## **Supporting Social and Cognitive Growth Among Disadvantaged Middle-Grades Students in TASC After-School Projects [Article 0602FA004]**

*Russell, Christina A.; Reisner, Elizabeth R.*

The field of after-school programming remains rife with unanswered questions. What constitutes quality in after-school programs? Are after-school opportunities valuable for participants regardless of their quality? Are differences in quality associated with differences in participant benefit? This sub-study of the longitudinal evaluation of The After-School Corporation (TASC) looks at how after-school opportunities with varying features affect urban middle-grades (6-8) adolescents who live in impoverished circumstances. Supported by the William T. Grant Foundation, the study explores the associations between after-school project features and the social and cognitive outcomes of disadvantaged middle-grades participants in TASC programs. The study relies on data collected during the 2001-02 and 2002-03 school years in eight TASC projects serving middle-grades students.

## **Program Articles**

### **Experiential Learning: A Process for Teaching Youth Entrepreneurship [Article 0602PA002]**

*Biers, Karen; Jensen, Christine; Serfustini, Ellen*

Youth of all ages are indicating an interest in starting a business. However, few classes on business start-up and management are available. Young people who are actively engaged in learning business management concepts also develop life skills such as decision making, communicating, and learning to learn. Studies have shown that youth who are in participatory, entrepreneurship classes develop a positive attitude toward starting a business. This article addresses how the experiential learning model provides an opportunity for youth to develop entrepreneurial skills. The entrepreneurial learning model is a learning process of doing, reflecting, and then applying.

### **An Introduction to the SMARTRISK Heroes Program: Positive Social Marketing for Adolescent Injury Prevention [Article 0602PA003]**

*Groff, Philip R.; Shea, Michael P.; Conn, Robert*

This article provides background on the SMARTRISK Heroes Program, a mobile stage production that introduces young people to the prevalence of unintentional injury for their age group and presents them with a series of strategies that will reduce the likelihood that

they will be unintentionally injured or killed. The program logic is consistent with theoretical work from the area of health promotion including the Protection Motivation Theory and the Transtheoretical Model of Stages of Change. The SMARTRISK Heroes Program has been the subject of a number of past evaluations that are briefly described. The program logic model was included in this article.

## Research and Evaluation Strategies

### Rethinking Concept Mapping for Youth Participatory Evaluation in the Context of Youth Development Programs [Article 0602RS001]

*Brown, Jennifer Southwick*

As a mixed-methods participatory approach, concept mapping (Trochim, 1989) provides unique opportunities for engaging youth in evaluating the contexts and environments in which they develop. Youth development programs, by definition, seek to fully engage youth as partners and provide them with opportunities to effect positive change. This includes encouraging youth to be involved in the process of designing, implementing, and evaluating the programs and activities in which they participate. Concept mapping has been used successfully with adult populations; however its utility with adolescents in the context of youth development programming has yet to be explored. This paper explores both the obstacles and successes associated with utilizing this participatory approach with youth.

### Statistical Testing of a Measure of Youth's Perceived Improvement in Life Skills [Article 0602RS002]

*Guion, Lisa A.; Rivera, Blanca E.*

This article presents findings from the statistical test of an instrument designed to measure youth's perceptions of the life skills that were improved as a result of their participation in 4-H Clubs. The questionnaire was administered to 126 4-H club members in Florida. The 19-item self-rating Life Skills Improvement Scale was examined for face and content validity. The results were also submitted for exploratory factor analysis and internal consistency testing. The factor analysis yielded a four-factor solution to the 19-item scale, which accounted for 62.6% of the variance in the scale. The Cronbach's alpha reliability coefficient for the 19 items was 0.88. The article also discusses implications and future use of the instrument, as well as recommendations for further study.

### Findings from Five Out-of-School Time Focus Groups: Professional Development Preferences, Experiences and Recommendations for Future Planning [Article 0602RS003]

*Buher-Kane, Jennifer; Peter, Nancy; Olitsk, Stacy; Kinnevy, Susan*

Evaluating professional development can assist with designing better programs in the future, yet survey instruments may not always capture the nuances of participant's experiences. Therefore, in order to develop better survey instruments, the Out-of-School Time Resource Center conducted a series of five focus groups. Questions pertained to participants' job-related needs, preferred types of professional development, characteristics of both "good" and "bad" workshops, reasons why new information is not utilized, and recommendations for policymakers/funders. Findings from the focus groups have been used to revise OSTRC pilot surveys, which will be standardized and published as an Evaluation Toolkit that can be used to design and evaluate OST conferences.

### **Nebraska 4-H Household Technology and Interest Survey [Article 0602RS004]**

*Barker, Bradley S.; Meier, Debra K.*

Nationally, 4-H has placed renewed emphasis in the areas of Science and Technology as a way to prepare youth for the 21<sup>st</sup> century workplace. Home access may become necessary to youth as they develop science and technology literacy via 4-H programs. A survey was sent to a random sample of 1,414 Nebraska families from a total population of 13,516. The survey examined the percentage of families that have access to computers and the Internet at home, computer components, use characteristics and specific areas of interest in science and technology. Results indicate that 96 percent of Nebraska 4-H families have access to computers at home. Nearly 92 percent of families had a connection to the Internet with a majority using dial-up connections. Families are interested in technology programs focused on basic computer knowledge and office application. In science, 4-H families indicated environment sciences and botany were areas of interest.

## **Resource Reviews**

### **Youth Development and Extension Family and Consumer Sciences [Article 0602RR001]**

*Scholl, Jan F.*

*Youth Development and Extension Family and Consumer Sciences* is the theme of a special issue of the 2006 Journal of the National Extension Association of Family and Consumer Sciences. The 2006 issue includes seven peer-reviewed articles, research abstracts and resource bibliographies.



---

## Integrating Youth into Community Development: Implications for Policy Planning and Program Evaluation

**Rosemary V. Barnett**

Department of Family, Youth, and Community Sciences  
The University of Florida  
Gainesville, FL 32611-0310  
[rbarnett@ufl.edu](mailto:rbarnett@ufl.edu)

**M.A. Brennan**

Department of Family, Youth, and Community Sciences  
The University of Florida  
Gainesville, FL 32611-0310  
[MABrennan@ifas.ufl.edu](mailto:MABrennan@ifas.ufl.edu)



---

## **Integrating Youth into Community Development: Implications for Policy Planning and Program Evaluation**

Rosemary V. Barnett and M.A. Brennan  
The University of Florida

As non-profits, volunteer groups, and nongovernmental organizations take on increasingly larger roles in contributing to local well-being, the active collaboration between youth and adults is vital to the long-term success of community development efforts. Similarly, as service activities become standardized components of high-school programs, youth are empowered to becoming long-term contributors to local development efforts. Through this process youth engage in shared citizenship, leading to greater investment in their communities. This research was based on the premise that youth, acting as central parts of the community development process, have the capacity to improve local well-being. It reflects input from 12 key informants and 418 youth who participated in a survey conducted on the development issues contributing to their involvement. The findings of this study provide insights into the factors most directly shaping youth attitudes and involvement in their communities, as well as presenting direct implications for applied use.

### **Introduction**

A direct need exists for program and policy planners to better understand the role, impact, and possibilities presented by youth involvement in the community development process. Historically, youth input in decision-making, problem-solving, local action, and evaluation in communities has received only limited attention. However, recent trends suggest that youth are



playing an increasingly important role in the development of their communities (Sherrod, Flanagan & Youniss, 2002).

As non-profits, volunteer groups, and nongovernmental organizations take on larger roles in contributing to local well-being, the active collaboration between youth and adults is vital to the long-term success of development efforts. Similarly, as community service activities become a more standardized component of high school programs, youth are increasingly being put in the position where they can become long-term contributors to local development efforts. Opportunities and responsibilities arise from these interactions that allow communities to become active participants in shaping their youth for more productive outcomes. Through this process youth become engaged in a shared citizenship, leading to greater investment in their communities beginning at an earlier age. Partnerships between educators, youth, and community leaders can enhance this learning process of youth in formal and informal ways.

The importance of youth involvement is particularly relevant in Florida, as communities throughout the state face extensive growth pressures, significant socio-demographic changes, and a growing youth population. Such conditions suggest an important role for youth to play in local planning and decision-making. The involvement of youth, and their active collaboration with adults, contributes to local community development, while presenting opportunities for personal self-growth, skill enhancement, and leadership development. Previous research suggests that successful youth/adult partnerships encourage youth to develop the capacity to serve in organizations and be active community leaders (Brennan, Barnett & Lesmeister, 2006).

## **Review of Literature**

The study of active youth involvement in community development is in many ways an underdeveloped field of inquiry. Both, the community and youth can benefit greatly from the involvement of young residents in all aspects of the community development process (Scales & Leffert, 1999; Brennan, Barnett & Lesmeister, 2006). Equally important, young people can become empowered to be problem-solvers, decision-makers, and committed leaders who will lead community development efforts in the future. Lastly, through the active interaction of youth and adults, a more representative voice is provided that reflects the diverse needs and wants of the community.

### **Community and Youth Development**

The development of community invokes a variety of images. Many definitions tend to emphasize locality, structural components, and other characteristics that reflect a shared territory. Community is much more than a geographic location however. It is a social and psychological entity that represents a place, its people, and their relationships (Wilkinson, 1991; Luloff and Bridger, 2003; Theodori, 2005). Community, from an interactional viewpoint, emerges from the conscious experiences of its members. It is a dynamic field of interaction rather than a rigid system or a simple piece of geography. The development of community is a dynamic process involving all segments of the locality, including the often forgotten younger members. The key component to this process is found in the creation and maintenance of channels of interaction and communication among diverse local groups that otherwise are directed toward their more limited interests. Through these relationships, individuals interact with one another, and begin to mutually understand common needs and create awareness of opportunities for involvement. Where these relationships can be established and maintained, increases in local adaptive capacities materialize and community can emerge.

All localities are composed of numerous distinct local groups (business, education, civic, cultural, etc.) whose members act to achieve individual interests and goals. Community, or the community field as it is often referred to, connects these diverse groups and serves to coordinate individual groups into purposive community-wide efforts. It cuts across class lines, organized groups, and other entities within a local population by focusing on the general and common needs of all residents. From this interactional perspective, community is a constantly changing environment motivated by voluntary community action and social interaction (Wilkinson, 1991; Swanson, 2001; Luloff & Bridger, 2003).

As residents and groups interact over issues important to all of them, what has come to be known as community agency emerges (Luloff & Bridger, 2003; Theodori, 2005). Agency reflects the building of local relationships that increase the adaptive capacity of local people within a common territory. Agency is therefore reflected in the capacity of people to manage, utilize, and enhance those resources available to them in addressing local issues (Wilkinson, 1991; Luloff & Bridger, 2003; Brennan, 2005).

While much of the attention given to building local capacities is often focused toward adults and civic organizations, youth are an increasingly visible and active component in community development efforts. The community is the first entity that all of us encounter beyond our families. It is important, therefore, for youth to have clearly defined roles and opportunities, which allow them to actively participate in their communities rather than having passive roles. Relationships between youth and community building are a key long-term involvement in community development efforts (Brennan, Barnett & Lesmeister, 2006).

### **Youth Engagement**

Civic engagement, such as civic education and opportunities for involvement in school extracurricular activities, are an important element of community involvement for youth (Sherrod, et al., 2002), as they represent a microcosm of the larger society where youth may practice skills. Other aspects, such as teacher behavior, school climate, instructional style that promotes dialogue and discussion, and school policies (Flanagan & Van Horn, 2003) may help define good citizenship, therefore, promoting youth involvement and serving as indirect motivators.

Citizenship, defined frequently by youth as "good behavior, doing what you are expected to do, obeying laws, and so on" has become a key developmental component toward motivating youth to engagement through volunteerism (Flanagan & Faison, 2001; Sherrod, et al., 2002). The developmental aspects of learning concepts of citizenship have been explored from a focus on obedience and support of status quo to using good judgment to form knowledge of one's rights and responsibilities (Torney-Purta, et al., 2001). Motivators for civic engagement, hence for citizenship, have been identified as important factors in community youth development literature (Youniss & Yates, 1997; Flanagan & Van Horn, 2001; Eccles & Gootman, 2002; Flanagan & Van Horn, 2003). By learning concepts of citizenship, youth build practices and processes that link to adult civic engagement (Verba, et al., 1995; Youniss, et al., 1997). When youth are able to contribute to some set of shared norms or values, they are further able to identify their own set of interests within the greater social framework (Sherrod, et al., 2002).

### **Youth Leadership for Community Program and Policy Planning**

Opportunities for leadership are necessary in order to develop young people and prepare them to be contributing adults in their communities. As schools and other social institutions consider how to integrate youth into the process of community development, it is important to ensure that conditions exist which will support the development of youth into healthy, contributing

adults. These contextual arenas will allow youth and adults to partner in addressing many social problems, leading to greater understanding and shared norms and values. Adults must recognize that adolescent's lives are also impacted by multiple systems, and as adults, they need opportunities to lead and represent within their greater community setting toward program and policy planning, implementation, and evaluation (Larson, et al., 2006). The merging of youth development and community building has been at the core of recent youth engagement literature (Nitzberg, 2005; Kubisch, 2005; Cahn & Gray, 2005; Lynn, 2005). Such has identified that youth must be fully engaged and involved in change efforts if they are to function as effective members of society (Nitzberg, 2005). By recognizing that youth have the capacity to lead, adults can provide important support in shifting youth leadership development from a skill based orientation to an essential investment in the future (Larson, et al., 2006).

It is the merging of youth development and community development that enables youth leadership to emerge. Adolescents should become actively involved in the design of community programs and policies. Their level of cognitive, moral and social development enables them to rise to more complex challenges as they transition to adulthood and the responsibilities that come along with it (Berk, 2005). Such involvement also sets the stage for long-term involvement, leadership development opportunities, and ownership of community development efforts. In order to develop youth leadership with organizational structures, certain specific "necessary conditions" must be in place for youth leadership to work effectively. Mechanisms for advancing youth into responsible roles include training youth to develop specific skills (such as reading budgets and working on committees) and training adults to explore their preexisting assumptions and stereotypes about youth as community leaders (Zeldin et al., 2000).

Three developmental stages of youth leadership have been prescribed as awareness, interaction and mastery (vanLinden & Fertman, 1998). Five dimensions of leadership that are within each of these three stages include Leadership Attitude, Leadership Information, Communication Skills, Decision-Making Skills and Stress Management. Training in specific skill areas, such as setting realistic goals, being able to delegate responsibility, setting priorities, using information to solve problems, managing conflict, and considering input from all group members, are important for youth to learn in a community leadership setting (Smith, Genry & Ketring, 2005). Further training in civic minded skills, such as understanding the legal or policymaking process, and how to work on community-based committees to address social problems, will enhance building strong youth-adult relationships and open doors for youth leadership on a broader contextual arena.

Youth leaders can also play important roles, such as identifying youth issues, developing youth programming, leading youth program delivery, and representing youth in their community (Huber, et al., 2003). As more meaningful involvement unfolds, organizational and community changes that reflect the priorities of youth will stimulate greater participation by youth in future decision-making. Youth, adults, schools, organizations, and communities may all potentially benefit from a greater investment in youth as they become engaged in leadership roles within their community (Larson, et al., 2006).

## ***Methods***

This research was designed to improve the understanding of, and ability to measure, the factors shaping youth involvement in community development efforts. To accomplish these goals, multiple research methods were utilized. Primary data collection took the form of survey research, key informant interviews, and focus group discussions with youth and development professionals involved in community development during summer 2005.

### **Data Collection Methods**

Initial data collection included key informant interviews with youth, 4-H program development agents, and adults actively involved with youth/adult partnerships. Key informants are individuals who, as a result of their knowledge, experience, or social status, can provide insights and access to information valuable in understanding issues, impacts, and needs (Krannich & Humphrey, 1986; Schwartz, et al., 2001). In June 2005, twelve key informant interviews were conducted. These included 4-H administrators, educators, youth participants, and program administrators that include youth in their efforts. Interviews facilitated our understanding of the context of attitudes and actions, as well provided information that would not have been evident from survey or secondary data.

Key informants were particularly helpful in the development of questions for use in the survey. Subsequent to these interviews, quantitative data was obtained from Florida teen 4-H participants through a self-administered questionnaire. A modified Total Design Method (TDM) was used in these surveys (Dillman, 2000). This method stressed a precise methodology, including specialized design and personalization. Questionnaires were distributed in group settings to all participants to help insure a high completion rate.

Data collection took place at four different 4-H events between June and September 2005. Included were the Florida 4-H Legislature, State 4-H Congress, and two "Learning and Leading" workshops. A total of 679 youth ages 12-18 took part in these events. Participants in these events, while not representative of all youth in Florida, were statistically representative of the overall 4-H teen population in Florida (Isaac & Michael, 1997). Completed and usable questionnaires were obtained from 418 respondents, representing a response rate of 62%. This response rate and the number of usable questionnaires returned were more than sufficient to statistically represent 4-H Youth in Florida (Isaac & Michael, 1997).

### **Variables Included in the Analysis**

Survey data was used to assess the relationships between youth attitudes and behaviors and the youth community involvement. Community involvement was measured with a series of questions that asked respondents about their frequency and level of participation in community activities.

Measures included the following items:

- (1) the number of clubs, groups, and/or organizations to which the respondent belonged (number of clubs/organizations)
- (2) hours per month spent on organized activities with other members of this community (number of hours)
- (3) a self-ranking description of the respondent's level of involvement in local activities, events, or organizations (1 – not at all active to 4 – very active)
- (4) membership on a community board (no/yes)
- (5) membership on a community council (no/yes) and
- (6) membership on a community committee (no/yes).

These variables were combined into a composite score that served as a single dependent variable.<sup>1</sup> Similar items have been used in previous research to measure social participation (Claude et al., 2000; Theodori, 2000; Brennan, 2005).

According to the social participation literature, a variety of factors influence community agency and shape the context in which it emerges. Among those included as independent variables in this analysis are sociodemographic characteristics,<sup>2</sup> local connections and networks,<sup>3</sup> capacity building for youth leadership,<sup>4</sup> methods for fostering youth enthusiasm and investment in community activities,<sup>5</sup> opportunities for personal/professional growth,<sup>6</sup> and youth linkages to program and policy planning.<sup>7</sup>

---

<sup>1</sup> The data were factor analyzed using several models/rotations (principal axis factoring and least squares methods with a varimax, quartimax, and direct oblimin rotations). The criteria established in advance of the selection of factor items were: a factor loading of .35 or higher; at least a .10 difference between the item's loading with its factors and each of the other factors; and interpretability (Kim & Mueller, 1978). In all analyses, only one factors was identified which had eigenvalues of greater than 1.0. Cronbach's Alpha for this index was .79.

<sup>2</sup> Sociodemographic variables included age (in years), gender, number of residents in the household, length of residences (years and months), rural/urban location (1 – farm to 6 – large city), and household income level (1- lower income to 3 – higher income).

<sup>3</sup> Local connections and networks included: "How often do you see or meet with at least one of the following types of people? Immediate family, Extended family, Close friends, Acquaintances, Neighbors, and with others through community clubs/groups." For each, the respondents were given response options of: (1) never, (2) a few times a year, (3) once a month, (4) a few times a month, (5) once a week, and (6) more than once a week.

<sup>4</sup> Capacity building for youth leadership index was composed: Consider the group/organization that you are most involved in. How strongly do you agree or disagree with the following statements? I'm actively involved in decision making, I'm actively involved in policy making, My community values youth in working toward solutions, I have a large say in how the organization grows, My input has value, and I influence the community by being in this organization. Response options ranged from 1 – Strongly Disagree to 5 – Strongly Agree influence. As with the dependent variable, a series of factor analysis were conducted using established selection criteria. In all analyses, a one factors model was identified. Cronbach's Alpha for this index was .87.

<sup>5</sup> Methods for fostering youth enthusiasm and investment in community activities were measured by: People become involved in community activities for many reasons. I participate in community activities because: I believe that the community needs new ideas, I believe that the community needs better services, I am dissatisfied with the way things are, and I enjoy local politics, and I feel it is my public duty as a citizen. Response options ranged from 1 – Strongly Disagree to 5 – Strongly Agree. Effective youth/adult partnerships can run into problems. How do the following affect your decision to become actively involved in your community? No identified role for youth in organizations, Not being assigned to committees, and Organizations not allowing youth to vote. Response options ranged from 1 – not a problem to 5 – major problem.

<sup>6</sup> Opportunities for personal/professional growth were measured by: How does each of the following influence your decision to become involved in community activities? Receiving recognition and local prestige, Having the opportunity to use my skills, Getting acquainted with people, Having the opportunity to develop new skills, Influencing the behavior of others, Having the opportunity to set an example for others. Response options ranged from 1= no influence to 5=strong influence. Also included was: How do the following affect your decision to become actively involved in your community? Not having skills to offer. Response options ranged from 1= not a problem to 5=major problem. This item was reverse coded for analytical proposes. In all analyses, a one factors model was identified. Cronbach's Alpha for this index was .75.

<sup>7</sup> Youth linkages to program and policy planning were measured by: People have different opinions regarding the importance and impact of youth volunteers on the community. How strongly do you agree or disagree with the following statements? Youth volunteers improve the local quality of life, The local economy is improved by youth volunteers, Youth volunteers help focus attention on local conditions, Youth as volunteers provide important local services, Youth volunteers don't actually do much in my community (reverse coded), and Local groups rely heavily on youth volunteers. Response options ranged from 1 – strongly disagree to 5 – strongly agree. In all analyses, a one factors model was identified. Cronbach's Alpha for this index was .73.

## Analysis

In this study, a series of multiple regression models were estimated to assess the partial effects of each predictor on youth community involvement (Table 1). These models focus on each conceptual area individually. A final model considered all independent variables together, and was ultimately reduced, in order to obtain the most parsimonious model.

Individually, all conceptual areas played a role in shaping community involvement. Leadership capacity and youth investment were the greatest predictor of community involvement ( $R^2=.23$  and  $.18$  respectively). Individual investment items and the leadership capacity index were all positively related to youth community involvement.

Among the sociodemographics that were positive and significantly related were age and household income. Rural/urban location was also significant, with rural youth being more involved. These items accounted for 11% of the variation in the model ( $R^2=.106$ ). In the case of the local networks variables, only interacting with others through social clubs/organizations was related to youth involvement and represented 11% of the variation in the model ( $R^2=.113$ ).

Lastly, personal/professional growth activities and the program/policy index also played a role in shaping youth involvement. Both were positively related to the dependent variable. These represented 12% ( $R^2=.118$ ) and 13% ( $R^2=.128$ ) of the variation in the model respectively.

**Table 1**

Comparison of Eight Multivariate Models on Youth Involvement in their Communities

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Reduced Overall
-- Standardized Regression Coefficients --								
<b>Demographic Variables</b>								
Gender (males=1)	-.070						-.022	
Age	<b>.248***</b>						<b>.183***</b>	<b>.179***</b>
Length of residence	.085						.046	
Household size	.054						.033	
Urban/Rural location	<b>-.101*</b>						<b>-.089*</b>	
Household income	<b>.134**</b>						.066	
<b>Local Networks</b>								
Immediate family		.029					.060	
Extended family		.070					.050	
Acquaintances		.088					.039	
Close friends		-.044					-.045	
With others in clubs/groups		<b>.290***</b>					<b>.151***</b>	<b>.164***</b>
Neighbors		.056					-.002	
<b>Leadership Capacity Index</b>								
			<b>.482***</b>				<b>.277***</b>	<b>.300***</b>
<b>Youth Investment Index</b>								
Need for new ideas				<b>.153**</b>			.053	
Need for better services				<b>.131*</b>			.044	<b>.110**</b>
Dissatisfaction with local life				.029			.065	
Enjoying local politics				<b>.166***</b>			.117	<b>.112**</b>
Public duty				<b>.165***</b>			-.038	
Identified role for youth				-.036			-.057	
Committee assignments				.065			.044	
Youth voting				-.078			-.030	
<b>Personal/Professional Growth</b>								
					<b>.347***</b>		<b>.104*</b>	<b>.115**</b>
<b>Program/Policy Index</b>								
						<b>.361***</b>	<b>.125***</b>	<b>.179***</b>
R <sup>2</sup> Adjusted	.106	.113	.231	.179	.118	.128	.391	.390
F value	7.87***	9.26***	119.64***	11.27***	54.85***	59.90***	10.58***	32.26***
Cases	349	391	396	378	401	402	344	344
* significant at the .05 level    ** significant at the .01 level    *** significant at the .001 level								

All variables were entered into the full model (Model 7). Seven were statistically significant and the model accounted for 39% of the variance (Adjusted R<sup>2</sup>=.391). However, since this model contained numerous nonsignificant variables, a more parsimonious reduced stepwise model was developed consisting of only the significant variables (Reduced Model). This model showed seven significant variables and accounted for 39% of the variance (Adjusted R<sup>2</sup>=.390).

In the reduced model, seven variables were positively related to the dependent variable – age, interacting with others through clubs/groups, the leadership capacity index, recognition of a

need for better services, an enjoyment of local politics, the personal/professional growth index, and the program/policy index. As each of these items increased, level of youth community involvement increased.

### **Implications, Recommendations, and Conclusions**

This study was based on the premise that youth, acting as central parts of the community development process, have the capacity to improve local well-being. It reflects input from 12 key informants and 418 active youth who participated in a survey conducted on the community development issues shaping their involvement. The findings of this study provide insights into the factors most directly shaping youth attitudes and involvement in their communities, as well as presenting direct implications for applied use.

Each of the significant variables identified present specific implications for program and policy development. Taken together they present a clear picture of efforts that can foster effective youth-adult partnerships, increase youth leadership, and better include youth in the community development process. Of the specific demographic variables, age was found to be significant. Age reflects the increased ability of youth to participate in community development as their cognitive, physical, moral, emotional and social development increases. This supports the notion that adolescents, particularly late adolescents, are capable and willing to learn leadership roles to improve communities.

Further, local connections and networks were found to be significant in explaining involvement. This can be interpreted that as more interaction with adults and other youth is encouraged through leadership building and increased involvement in local issues, youth will continue to participate. Youth need social interaction if they are to flourish and increased involvement supports this developmental aspect.

Capacity building for youth leadership was included in an index and found to be a predictor of community involvement. This analysis explored the influences related to input, decision making and the value the community places on youth involvement on whether youth become involved in community activities. Larson (2000) found that when youth are involved in activities that have intrinsic motivation, that are challenging enough to engage their attention, and that occur over time, they develop initiative. The positive relationship between the index and the dependent variable support the need for youth capacity building to be considered by community leaders. Community and youth development leaders may focus on building the kinds of opportunities that would allow youth to set examples to other youth, providing leadership development training, allowing youth to take on increased leadership roles with other younger or less trained youth, and continue to build their community development abilities by enhancing their own moral and civic development skills, while simultaneously developing other necessary social skills.

Certain investments were also found to significantly relate to involvement, specifically related to methods for fostering youth enthusiasm. By allowing youth the opportunity to provide new ideas, they would be more likely to be active participants in community development efforts. This sends youth the message that they are welcome in the decision-making process, that they are capable of good decision-making, and that they have the knowledge and understanding of issues to significantly contribute to discussions. Similarly, youth that enjoy local politics and have a desire for public duty will be more likely to become involved, as well as those who feel that the community has a need for better services.



Opportunities for personal/professional growth were found to be positively related to community development and relate to being able to develop and use skills, influence the behavior of others, and set an example. Getting acquainted with other people and being recognized locally are also important aspects for youth as measured by this index.

Youth linkages to program and policy planning were found significantly related to involvement and this supports previous research findings that show youth are more likely to actively be involved when they believe that their actions make a difference and are having an impact (Scales and Leffert, 1999). By promoting the impact that youth have and recognizing their efforts, youth will become more visible players in the community development process and evolve into more dynamic roles as empowerment occurs.

Based on these findings the following eight general steps are suggested to enhance and increase the level of involvement of youth in community development efforts:

- 1. Provide youth opportunities to become long-term contributors to community organizations.** Consider new ways to involve youth and allow them to provide input in decision-making, problem solving and action-taking activities within local organizations, non-profits, volunteer groups, youth programs and nongovernmental organization. This may include putting youth on advisory boards, giving them voting privileges, and serving on committees. This step reflects the significance of local networks and may require more active collaboration with youth than before in order to engage them in ways that will open doors for them to contribute. As youth engage in more sustained positive relationships with adults, other youth, and community organizations, they will learn that they are valued citizens of their communities.
- 2. Present opportunities for personal self-growth, skill enhancement, and leadership development for youth.** This step reflects the significance of personal/professional growth. This may occur through increasing involvement of youth with adults in active collaboration toward local community development. Integrating youth into committees with adults as mentors and guides in this process will enable them to build the leadership skills and personal characteristics necessary for future adult involvement. Training in areas such as conflict management, stress management and communication skills will lead to changes in attitudes and respect as youth become more confident in their skill level.
- 3. Encourage youth to develop the capacity to serve in organizations and become community leaders.** Adults must first recognize and develop their own existing capacities, motivations and barriers to partnering with youth within organizations and local governmental agencies. Once existing levels are determined, adult outreach to youth through schools, youth organizations, and youth groups can connect adults to youth in order to increase youth leadership capacities. Adults can and should inform youth of their value and the need for their service. This step reflects the significance of youth leadership capacity and youth investment. It may be done by letting youth know that their involvement is valued, letting the community and public at large know that youth are doing a good job, and recognizing them formally through recognitions that officially thank them for their service.

- 4. Engage youth actively so they may provide new ideas and voices that will stimulate enthusiasm and investment in community structures.** This step relates to the significance of youth investment through an enjoyment of local politics for greater youth involvement. Adults must understand the invaluable impact of youth involvement in order to engage youth. This involves respecting their own youth culture, getting youth involved at all levels, and actively soliciting their input, rather than keeping their involvement on a surface-level relationship that is strictly limited to task oriented volunteerism. If youth are empowered to become full partners in the community development process, they become more invested in long-term participation and contribution to their community.
- 5. Form connections to local schools and teachers, particularly with those who actively interact with youth in community issues.** This step directly relates to the significance of local networks. This may include the obvious civic education oriented approach, such as with student government groups, as well as the more subtle community building oriented approach like school entrepreneurship and business education organizations that promote life skills, fiscal responsibility, and leadership. By introducing community needs and opportunities to meet these, youth participation can be encouraged and reinforce the importance of involvement in community action and policy making. Ties back to citizenship, entrepreneurship, and civic education in the community will provide classroom opportunities connected to real world scenarios. Such connections provide teachers and students with learning opportunities, allowing youth to practice these abstract constructs in community development application.
- 6. Link youth to comprehensive planning and policy efforts in their communities.** This step reinforces youth linkages to program and policy planning and can be accomplished by involving youth in the examination of existing policies as well as in the evaluation potential policy alternatives. By fostering youth input into policy review and development, youth will move from their role of often inactive citizens to fully engaged stakeholders. This powerful connection to real community issues will involve youth not only in present decisions, but in future outcomes. By empowering youth to become full partners in the community development and policy making process, they will become more invested in long-term participation and contribution to community programs/policy.
- 7. Allow youth to identify their own interests within the greater social framework of community development and policy making.** As youth are brought into organizations and civic roles that they have traditionally been excluded from, they can participate in active and equal decision-making at multiple levels. This step relates to the significance of youth linkages to policy and program development. An increased exposure to shared norms/values through discussion of community issues and concerns will encourage youth to consider where their interests lie. Such deliberation will encourage them to seek activities where they can create positive change for greater good. These collaborations will also lead to skill enhancement and confidence building, allowing them to overcome feeling any intimidation with being involved, which will help them as they navigate toward adulthood.
- 8. Involve youth in confronting more serious social problems and conditions that will allow them to see themselves as community development agents capable of transforming their environments.** By transforming youth from passive citizens waiting for adulthood, to active citizens engaging in social change, this step reinforces that youth

will have a voice in decisions that transform policies, make institutions more accountable, and affect their lives. This can be reinforced by adult partnerships that value youth and recognize the importance of their contributions while providing opportunities that build community.

## Conclusion

Community involvement is central to the development of community. From this perspective, community development is facilitated by the ability of local people to mobilize resources to address local needs. Youth are in a position to be the stable and long-term contributors that help guide this process. Youth represent a vast and often untapped resource, for immediate and long-term community development efforts. They also provide an invaluable resource for program planning and effective evaluation. Through their collaborations with adults and organizations, youth achieve skill enhancement, confidence building, and leadership development. The important role of youth in community development and their motivations for this kind of civic engagement remains an important research and program development focus. With such knowledge, youth and community workers can better understand how to maximize these powerful resources and enhance local development efforts in both the short and long-term.

## References

- Berk, L. (2005). *Child Development*. Boston, MA: Allyn & Bacon.
- Brennan, M.A., Barnett, R., and Lesmeister, M. (2006). Enhancing Leadership, Local Capacity, and Youth Involvement in the Community Development Process: Findings from a Survey of Florida Youth. *Journal of the Community Development Society*. (in press).
- Brennan, M.A. (2005). Volunteerism and community development: A comparison of factors shaping volunteer behavior in Ireland and America. *Journal of Volunteer Administration* 23(2): 20-28.
- Cahn, E.S. & Gray, C. (2005). Using the coproduction principle: no more throwaway kids. Putting Youth at the Center of Community Building. *New Directions for Youth Development* 106: Summer 2005.
- Claude, L., Bridger, J. and Luloff, A.E. (2000). Community well-being and local activeness. In P. Schaeffer and S. Loveridge (eds.), *Small Town and Rural Economic Development: A Case Studies Approach*. Westport, CT: Praeger.
- Dillman, D. (2000). *Mail and Internet Surveys*. New York, NY: Wiley and Sons.
- Eccles, J., & Gootman, J. (2002). *Community programs to promote youth development*. Report of the Committee on community-level programs for youth, of the National Research Council and Institute of Medicine. Washington, DC: National Academy of Sciences.

- Flanagan, C.A. & Faison, N. (2001). Youth civic development: Implications for research for social policy and programs. *Social Policy Reports*, no.1, 2001.
- Flanagan, C. & Van Horn, B. (2001). Youth civic engagement: Membership and mattering in local communities. *Focus*. Davis: 4-H Center for Youth Development, University of California.
- Flanagan, C. & Van Horn, B. (2003). Youth civic development: A logical next step on community youth development. In Villarruel, F.A., Perkins, D.F., Borden, L.M. & Keith, J.G., (eds.) *Community Youth Development*. Thousand Oaks, CA: Sage, pp. 273-296.
- Huber, M.S.Q., Frommeyer, J., Weisenbach, A. & Sazama, J. (2003). Giving youth a voice in their own community and personal development. In Villarruel, F.A., Perkins, D.F., Borden, L.M. & Keith, J.G., (eds.) *Community Youth Development*. Thousand Oaks, CA: Sage, pp. 297-323.
- Isaac, S. & Michael, W. (1997). *Handbook in Research and Evaluation*. EdITS Publishers, San Diego, CA.
- Kim, J. & C. Mueller. (1978). *Factor Analysis: Statistical Methods and Practical Issues*. Beverly Hills, CA: Sage Publications.
- Krannich, R. & Humphrey, C. (1986). Using key informant data in comparative community research: an empirical assessment. *Sociological Methods and Research* 14: 473-493.
- Kubisch, A. (2005). Comprehensive community building initiatives—ten years later: What we have learned about the principles guiding the work. Putting Youth at the Center of Community Building. *New Directions for Youth Development* 106: Summer 2005.
- Larson, R. (2000). Toward a psychology of positive youth development. *American Psychologist*, 55(1): 170-183.
- Larson, R.W., Wilson, S. & Mortimer, J.T. (2006). Adolescence in the 21<sup>st</sup> Century: An International Perspective. <http://www.s-r-a.org/conclusions.html>.
- Luloff, A.E., & Bridger, J. (2003). Community agency and local development. In D. Brown & L. Swanson (eds.), *Challenges for rural America in the twenty-first century*. University Park: Pennsylvania State University Press.
- Lynn, A. (2005). Youth using research: Learning through social practice, community building, and social change. Putting Youth at the Center of Community Building. *New Directions for Youth Development* 106: Summer 2005.
- Nitzberg, J. (2005). The meshing of youth development and community building. Putting Youth at the Center of Community Building. *New Directions for Youth Development* 106: Summer 2005.
- Scales, P.C. & Leffert, N. (1999). *Developmental Assets*. Minneapolis, MN: Search Institute.
- Schwartz, M., Bridger, J., & Hyman, D. (2001). A validity assessment of aggregation methods for multiple key informant survey data. *Journal of the Community Development Society* 32(2): 226-237.

Sherrod, L.R., Flanagan, C. & Youniss, J. (2002). Dimensions of Citizenship and Opportunities for Youth Development: The What, Why, When, Where and Who of Citizenship Development. *Applied Developmental Science* 6(4): 264-272.

Smith, T.A., Genry, L.S., & Ketring, S.A. (2005). Evaluating a youth leadership

Swanson, L. (2001). Rural policy and direct local participation: Democracy, inclusiveness, collective agency and locality-based policy. *Rural Sociology*. 66(1):1-21.

Theodori, G. (2000). Levels of analysis and conceptual clarification in community attachment and satisfaction research: connections to community development. *Journal of the Community Development Society* 31(1): 35-58.

Theodori, G. (2005). Community and community development in resource-based areas: Operational definitions rooted in an interactional perspective. *Society and Natural Resources* 18: 661-669.

Torney-Purta, J., Lehmann, R., Oswald, H. & Schultz, W. (2001). *Citizenship and education in 28 countries: Civic knowledge and engagement at age fourteen*. Amsterdam, NL: International Association for the Evaluation of Educational Achievement.

vanLinden, J.A. & Fertman, C.I. (1998). *Youth Leadership*. San Francisco, CA: Jossey-Bass.

Verba, S., Scholzman, L., & Brady, H. (1995). *Voice and equality: Civic volunteerism in American life*. Cambridge, MA: Harvard University Press.

Watts, R.J., Williams, N.C. & Jagers, R.J. (2005). Sociopolitical development. *American Journal of Community Psychology* 31(1-2): 185-194.

Wilkinson, K. (1991). *The Community in Rural America*. New York, NY: Greenwood Press.

Youniss, J., & Yates, M. (1997). What we know about engendering civic identity. *American Behavioral Scientist* 40: 620-631.

Zeldin, S., A. K. McDaniel, D. Topitzes, & M. Calvert. (2000). Integrating research and practice to understand and strengthen communities for adolescent development: An introduction to the special issue and current issues. *Applied Developmental Science*. 4 (Suppl. 1):2-10.

---

## **Qualitative and Quantitative Assessments of Thriving and Contribution in Early Adolescence: Findings from the 4-H Study of Positive Youth Development**

**Amy Eva Alberts**

Tufts University  
Lincoln Filene Building, Rm 312  
Medford, MA 02155  
Phone: 617-627-4509  
Fax: 617-627-5596  
[amy.alberts@tufts.edu](mailto:amy.alberts@tufts.edu)

**Elise DiDenti Christiansen**

Boston College  
[elisedidenti@hotmail.com](mailto:elisedidenti@hotmail.com)

**Paul Chase**

Tufts University  
[paul.chase@tufts.edu](mailto:paul.chase@tufts.edu)

**Sophie Naudeau**

Tufts University  
[sophienaudeau@hotmail.com](mailto:sophienaudeau@hotmail.com)

**Erin Phelps**

Tufts University  
[erin.phelps@tufts.edu](mailto:erin.phelps@tufts.edu)

**Richard M. Lerner**

Tufts University  
[richard.lerner@tufts.edu](mailto:richard.lerner@tufts.edu)



## Qualitative and Quantitative Assessments of Thriving and Contribution in Early Adolescence: Findings from the 4-H Study of Positive Youth Development

Amy Eva Alberts, Paul Chase, Sophie Naudeau, Erin Phelps and Richard M. Lerner  
Tufts University

Elise DiDenti Christiansen  
Boston College

**Abstract:** Research and practice in youth development converge in an interest in positive development, or thriving. They converge also in seeking to promote among youth an orientation to act in support of their own and others' well-being through contributions to self, family, and community. Based on the results of both qualitative (open and axial coding of parents' and students' answers to several open-ended questions) and quantitative analyses of data from Wave 2 (Sixth Grade; 2003-2004) of the 4-H Study of Positive Youth Development (PYD), we found that adolescents and parents define a thriving youth in different ways and, as well, that the groups differ in the salience of contribution as part of their respective conceptions of thriving. We discuss the implications for research and practice of the two generational groups' contrasting views of thriving and contribution.

### Background

Current emphases in both research and practice pertinent to youth development suggest that all adolescents have strengths and when these strengths are aligned with the resources (or "assets") for healthy development present within their communities, positive development will be promoted (Lerner, 2004; Lerner, et al., 2005). During the adolescent years, exemplary development has been hypothesized as being constituted by psychological, behavioral, and social characteristics reflecting "Five Cs," that is, competence, confidence, caring, character, and positive social connections (e.g., Eccles & Gootman, 2002). When these "Five Cs" develop in a young person, he or she may be seen as thriving. In turn, among thriving youth a Sixth C, contribution (to self, family, community, and civil society), is believed to develop (Lerner, 2004).

Some youth development organizations, such as 4-H and Boys & Girls Clubs, have emphasized that their programs help lead a thriving young person toward contribution (e.g., see Roth & Brooks-Gunn, 2003a, 2003b). However, it was not until the launching of the 4-H Study of Positive Youth Development (PYD) that empirical evidence was presented for the presence of the Five Cs (as first-order latent constructs), for their convergence on a second-order latent construct of PYD, and for the presence as well of the sixth C of contribution (Lerner, et al., 2005).

The 4-H Study of Positive Youth Development, funded by the National 4-H Council, is concerned with the identification of the individual and contextual factors that lead to PYD, and ultimately, youth contributions to self, others, and community. The study is predicated on developmental systems theories that stress the potential for plasticity in development across the life span. In this conception, plasticity arises through individual  $\leftrightarrow$  context relations. Such contributions are envisioned to involve both a behavioral (action) component and an ideological component (that is, the young person's acts of contribution are predicated on a commitment to moral and civic duty) (Lerner, Dowling, & Anderson, 2003). Youth who believe they should contribute to self and context and who act on these beliefs reflect and promote their own positive development, as well as the "health" of their social context. This is theoretically referred to as adaptive person  $\leftrightarrow$  context developmental regulations.

While theory and preliminary data suggest the importance of youth contribution, we know less about the extent to which youth and parents value contribution as a central component of positive development (or thriving). Certainly, if young people and their parents do not regard contribution as an important outcome of participation in youth development programs and/or as a central component of a thriving youth, then theories linking PYD and contribution would be deficient in their ecological validity. In addition, practitioners placing emphasis on the development of contribution as a key "deliverable" of their programs would not fit well with the interests of their clientele if the enhancement of contribution was not of core interest to youth and parents.

Of course, parents and youth can and do respond to quantitative questions about the significance or salience of indicators of contribution (e.g., Benson, Leffert, Scales, & Blyth, 1998; Lerner, et al., 2005; Scales, et al., 2000). Nevertheless, such quantitative data do not necessarily reflect the unprompted salience of constructs relevant to contribution in the conceptions held by adolescents and their parents regarding the meaning of a thriving young person. Accordingly, qualitative data are useful for allowing assessment of the unprompted salience of contribution and, through triangulation with quantitative data, assessing the ecological validity of emphases in both theory and practice on the importance of contribution in defining and acting to promote positive youth development, respectively.

Accordingly, in the present study we sought to:

- First, use qualitative information available in the 4-H Study of PYD data set to assess the unprompted salience of constructs related to contribution and to the "Five Cs" of PYD in the conceptions of adolescents and parents about the nature of a thriving young person.
- Second, because past research has revealed that indicators of PYD vary in regard to sex and socioeconomic status (SES) (e.g., Fredricks & Eccles, in press; Lerner, et al., 2005), we also assessed the covariation between participants' sex and SES, and youth



identification of contribution to self, family, and community when describing a thriving youth.

- Third, the research assessed whether the evidence about youth contribution and PYD garnered through qualitative analyses could be triangulated with quantitative data about these constructs.

## METHODS

The current investigation was conducted as a part of the 4-H Study of Positive Youth Development (PYD), which is a longitudinal investigation starting with 5<sup>th</sup> grade youth in the United States and their parents. The 4-H study is designed to test a theoretical model about the role of developmental assets in the promotion of PYD, as conceptualized by the "Five Cs" of PYD (competence, confidence, connection, character, and caring), the "sixth C" of contribution, and the corresponding diminution of problem and risk behaviors (Lerner, et al., 2005). Full details of the methodology of the 4-H Study have been presented in prior reports (Lerner, et al., 2005; Theokas & Lerner, in press; also see Jelacic, et al., 2006). Accordingly, we present those features of methodology pertinent to the focus of this investigation.

### Design

The 4-H Study uses a form of longitudinal sequential design (Baltes, Reese, & Nesselroade, 1977). Fifth graders, gathered during the 2002-2003 school year (Wave 1 of the study), were the initial cohort within this design. To maintain at least initial levels of power for within-time analyses and to assess the effects of retesting, all subsequent waves of the study involve the addition of a "retest control" cohort of youth who are in the current grade level of the initial cohort; this new cohort is then followed longitudinally.

Accordingly, in Wave 2 of the study (sixth grade for the initial cohort), a retest control group of sixth graders who were new to the study were gathered; these youth became members of a second longitudinal cohort. Similarly, each subsequent wave of the study introduces a new cohort which is then followed longitudinally throughout the rest of the study.

The present report provides data from the second wave of the 4-H Study and, as such, presents the results of analyses involving two different subsets of the overall set of study participants. That is, the present sample of sixth graders includes participants from the initial cohort who remained in the longitudinal sample for Wave 2 and the new cohort of sixth graders, who were introduced into the study as members of the Wave 2 retest control group. Details about these groups of participants are provided below.

### Participants

The Wave 2 sample was comprised of 982 sixth grade youth from the initial Wave 1 cohort (45.6% males; 54.4% females) and, as well, a "retest control" sample of 893 sixth graders (39.3% males; 60.7% females). The combination of longitudinally studied (Wave 1-Wave 2) participants from the initial cohort and the retest control participants from Wave 2 resulted in a total of 1,875 sixth grade participants at Wave 2 (42.6% males; mean age = 12.18 years, SD = .87 years; 57.4% females; mean age = 12.09 years, SD = .80 years). Wave 2 participants came from sites located in 18 states across the nation. Participants varied in regard to race/ethnicity, socioeconomic status, family structure, rural/urban location, geographic region, and experiences in after-school programs (Lerner, et al., 2005). Schools were chosen as the main method for collecting the sample.

For the present report we focused on a subsample ( $N = 691$ ) of the overall Wave 2 participants. That is, given our interest in comparing youth and parent conceptions of thriving, the subsample of adolescent participants we used consisted of all adolescent responses for whom we had matching parent responses.

### **The Student Questionnaire (SQ) and the Parent Questionnaire (PQ)**

As mentioned above, the measurement model used in the larger 4-H Study of PYD was designed to provide indices that would test the developmental contextual, individual  $\leftrightarrow$  context model of the development of PYD. Accordingly, the SQ included measures pertinent to the "Five Cs" of PYD, problem behaviors, pubertal level of development, individual and ecological assets, developmental regulation, activities, and demographics. The PQ was composed of two types of items: (a) items about the parent or guardian and (b) items about the child. Information regarding the specific items included in both questionnaires can be found in Lerner, et al. (2005).

In regard to the present research, youth and their parents responded to open-ended questions intended to appraise self-generated definitions of thriving in adolescence. In addition, youth provided data on several quantitative measures of contribution and PYD, which were used for the purpose of triangulation with qualitative data on these constructs. The SQ and PQ qualitative questions are presented below (see "Coding of qualitative data"). Information about the quantitative measurement of youth contribution and PYD is presented in Lerner, et al. (2005).

### **Procedure**

For Wave 2 of data collection (2003-2004), teachers or program staff gave children an envelope to take home to their parents, which contained a letter explaining the study, consent forms, a parent questionnaire, and a self-addressed envelope for returning the parent questionnaire. Data collection was conducted by project staff or by assistants hired for testing at remote locations. Students, who were unable to be surveyed at their school or 4-H site because they were either absent during the day of testing, or because the school superintendent did not allow Wave 2 testing to occur in the school, received a survey in the mail. Parents were asked to complete the Parent Questionnaire (PQ) at home and to return it via mail.

### **Coding of qualitative data**

The foci of the present research were pursued through analyses of qualitative and quantitative data available within the 4-H Study data set. Across both youth and parents, the construction of the qualitative data base required the development and implementation of a system of coding several open-ended questions.

Youth responded to four open-ended questions:

1. Everybody knows kids in their school or neighborhood that they think are doing well in all areas of their life. In your opinion, what is he or she like? What sort of things does he or she do?
2. Everybody also has an idea about how she or he would like to be. If you imagine yourself doing really well in all areas of your life, what would you be like? What sorts of things would you do?
3. Now, think about yourself and your life now. How would you describe how you are doing? What are you like? What sorts of things do you do?
4. What do you think is the most important/meaningful thing that you do?

Youth answers were coded by two raters through a combination of open coding (i.e., identification of concepts within the data) and axial coding (i.e., relating categories to their subcategories) (Strauss & Corbin, 1998). While raters did create codes for data not captured by a preconceived theoretical framework, coding predominantly reflected the general concepts used in the PYD literature (i.e., the five Cs of competence, confidence, connection, character, caring, and the sixth C, contribution). This decision was based on recent work by King, et al. (2005), who found that definitions of thriving by adults and youth were able to be organized according to the "five Cs" of PYD. A preliminary codebook was developed by two raters based on the answers provided by 75 randomly selected participants.

To ascertain coding reliability across the raters, each rater used this preliminary codebook to independently code an additional 75 randomly selected cases. There was a 91.26% agreement between the two raters and a high Cohen's kappa,  $k = .92$ . Given this consistency, the remaining youth answers were coded by one of the two raters.

Parents responded to the following qualitative questions: How can you tell if an adolescent is thriving or doing really well in all areas of their lives? In your opinion, what is he or she like, what sorts of things does he or she do? Unlike the youth participants, parents were only asked one question intended to capture their definitions of thriving. This decision was based on adults' general level of comprehension and relative capacity to provide succinct answers, as well as the need to keep the Parent Questionnaire relatively short.

Parents' answers were also coded by two raters through a combination of open and axial coding. Once again, the two raters created codes reflective of concepts used in the PYD literature and, as well, codes were developed for data not captured by this preconceived theoretical framework. The two raters developed a preliminary codebook based on the answers provided by 100 randomly selected participants. Inter-rater reliability was determined for a random sample of 100 cases. There was an 86.83% agreement between the two raters and a high Cohen's kappa,  $k = .88$ . Given this consistency, the remaining parent answers were coded by one of the two raters.

## RESULTS

The goals of this study included:

- To assess through using qualitative data from the 4-H Study the unprompted salience of constructs related to contribution and to the "Five Cs" of PYD in the conceptions of adolescents and parents about the nature of a thriving young person
- To assess the association between participants' sex and SES and the likelihood of whether adolescents mentioned contribution to self, family, and community when describing a thriving youth
- To assess whether qualitative data could be triangulated with quantitative data about youth contribution to community and PYD.

Accordingly, the first analyses of the open-ended questions asked of parents and youth were conducted to determine whether parents and youth define thriving in similar or different ways and, specifically, whether contribution was a salient component of either group's conceptions of a thriving youth.

### **Is contribution part of adolescents' or parents' conceptions of a thriving youth?**

Throughout this study we examined two questions: First, "What is the prevalence of youth and parents who mention contribution to self, family, and community as a part of thriving or/and as an important thing that youth do?" Second, "Do parents and students define thriving in similar or different ways?"

Table 1 presents the percentages of parents/guardians and youth who mentioned the "5 Cs," Contribution, and other attributes of youth development in answering the open-ended questions included at Wave 2. Parent/guardian and youth proportions that significantly differ are in bold in Table 1. Table 2 presents a selection of parent and youth quotations illustrating codes associated with the "Five Cs" of PYD and other attributes of youth development.

**Table 1**

*Proportion of Parents or Guardians and Youth who Mentioned the "Five Cs" of PYD, Contribution, and Other Attributes of Youth Development in their Definitions of Thriving*

Codes		Proportion of sample to mention code at least once	
		Parents or Guardians	Youth
The "5 Cs" of PYD and Contribution			
	<b>Competence (all sub-codes)</b>	<b>34.9</b>	<b>62.5*</b>
	Competence: academic	19.3	47.0
	Competence: other (e.g., social)	22.8	34.6
	<b>Confidence</b>	<b>7.2</b>	<b>3.8*</b>
	<b>Connection</b>	<b>25.4</b>	<b>36.2*</b>
	<b>Character</b>	<b>14.1</b>	<b>48.8*</b>
	<b>Caring</b>	<b>6.0</b>	<b>21.9*</b>
	PYD (computed as the sum of Cs)	52.0	86.4
	One C	24.7	26.1
	Two Cs	20.1	34.4
	Three Cs	6.2	22.6
	Four Cs	0.9	3.2
	Five Cs	0.1	0.0
	<b>Contribution (all sub-codes)</b>	<b>13.6</b>	<b>42.0*</b>
	Contribution to self	7.3	6.1
	Contribution to family	2.6	14.0
	Contribution to community	5.0	28.9
Participation in activities			
	Sports	18.5	52.0
	Arts and crafts	2.6	4.9
	Dance/music/singing/drama	6.7	13.0
	Many different activities	5.2	3.9
	Movies/TV	2.0	4.3
	Outdoors	3.9	4.2
	Play/have fun (includes "hanging out")	7.5	25.2
	Reading/writing	4.2	7.7
	Youth development	1.1	2.5
	Go to school/learn	0.0	13.0
Other youth attributes			
	Absence of negative behaviors	0.7	3.9
	<b>Professional/educational aspirations</b>	<b>1.4</b>	<b>21.7*</b>
	Active	5.2	3.3
	<b>Bright/smart</b>	<b>1.0</b>	<b>21.3*</b>
	Communicative/open	13.6	0.7
	Curious about new things	4.5	0.4
	Sense of humor	2.9	10.9
	Positive attitude/orientation to life	7.0	3.8
	<b>Happy</b>	<b>23.6</b>	<b>3.9*</b>
	Positive orientation to school	3.6	2.3
	Religiosity/spirituality	4.4	7.5

\*These parent/guardian and youth proportions are significantly different. All  $z$  scores exceed 2.58 and all  $p$ s are  $<.01$ .

**Table 2**

A Selection of Parent or Guardian and Youth Quotations that Illustrate Codes Associated with the "Five Cs" of PYD and Other Attributes of Youth Development

Codes	Responses	
	Parent or Guardian	Youth
Competence	"Like to balance both his academic and physical activities so that he doesn't burn out at a young age."	"I would be able to handle and do everything really well."
Competence: academic	"Involved and successful academically, socially, and physically in school."	"I'd study hard and get good grades and try to get into college."
Competence: other (e.g., social)	"They are well-liked and move easily in circles of friends."	"I would try to talk to everyone and be very friendly with everyone."
Confidence	"An adolescent is happiest when they are comfortable with themselves."	"I would be proud of myself."
Connection	"Parents are involved with their activities."	"Have a great relationship with family."
Character	"Respectful and courteous to those he interacts with including friends, teachers, and family."	"I would try to be the best person I could be, like being nice to people."
Caring	"Is interested in the feelings and the well being of others."	"Really caring for others and have a good heart."
Contribution to self	"He eats well and enough rest and physical activity."	"I would be very active and healthy."
Contribution to family	"Helps out with chores at home."	"I would be like a mother. I would take care of my sisters and brothers."
Contribution to community	"Serves or gives back to community."	"I would help the homeless and endangered species. And I would help make peace on earth!"
Professional/educational aspirations	"He is determined to get his education, so that when he grows up, he will be successful."	"Going to a good school and getting a good education."
Bright/smart	"Has a good head on her shoulders."	"I think she is good in everything so she is smart, and intelligent."
Happy	"They are generally happy and satisfied with themselves and the world around them."	"At school or at home just be happy."

The data in these tables show that parents and youth indeed differ in what they emphasize when describing a thriving youth. Within both, the parent group and the youth group, if a term pertinent to a C was mentioned it was most commonly linked to competence. However, a greater proportion of youth included the "Cs" of competence, connection, character, and caring in their definitions of thriving than did their parents. Youth were also more likely to mention professional/educational aspirations (21.7%) and the personal characteristic of being bright/smart (21.3%) than were their parents (1.4% & 1.0%, respectively). In turn, although less frequent than youth in their use of terms that fit overall with the Five Cs, parents thought a

thriving young person was someone who was happy (23.6%); their mention of this attribute exceeded the frequency with which youth used this term (i.e., 3.9%).

However, of particular importance for the present research, the data in Table 1 indicate that there was a substantial disparity in the proportion of parents (13.6%) and youth (42%) who mentioned the "Sixth C" of contribution. As measured within the present research, it appears then that contribution is seen by youth as a much more salient attribute of a thriving young person than is the case among parents. In addition, when parents did mention contribution as a facet of a thriving youth they were more likely to emphasize contribution to self (7.3%), while youth focused most on contribution to community (28.9%) ( $p < .01$ ).

These findings suggest that the emphasis among researchers and practitioners on promoting youth contribution corresponds more with views of what characterizes a thriving youth held by young people themselves than by their parents. It is important to ask, however, given that past PYD research has demonstrated sex and socioeconomic status (SES) effects for youth contribution (Fredricks & Eccles, in press; Lerner, et al., 2005), if these youth-parent differences vary also in relation to the sex of the young person or his or her SES.

In regard to sex, boys and girls did not significantly differ in their views about contributions to self. However, the proportion of girls who mentioned contribution to family at least once was significantly higher than was the proportion of boys,  $\chi^2(1) = 6.06, p \leq .014$ . Similarly, the proportion of girls who mentioned contribution to community at least once was significantly higher than was the corresponding proportion of boys,  $\chi^2(1) = 9.98, p \leq .002$ .

SES was measured through parental report of household income and was dichotomized (i.e., median-split: below the median [\$45,000] and above the median). Youth with low SES were significantly more likely than youth with high SES to mention contribution to family at least once,  $\chi^2(1) = 14.39, p \leq .000$ . No significant differences were found between the two groups in regard to contribution to self and contribution to community.

In short, then, contribution, when measured through qualitative analyses, appears to be a generally more salient feature of thriving in the views of youth, and perhaps – in regard to some facets of contribution – especially for girls and in lower SES groups, than is the case for parents. Do these findings from qualitative analyses converge with analyses of quantitative data? The answer appears to be yes.

### **Do qualitative data triangulate with quantitative data about youth contribution to community and PYD?**

Establishing the convergence between qualitative and quantitative assessments of contribution is important for validating one's findings and, as well, for deriving recommendations for practice. Data pertinent to contribution can only be addressed within the youth sample, since quantitative measures of contribution to community and PYD were not included within the Parent Questionnaire.

Youth scores on the quantitative measure of contribution to community were significantly correlated with youth mentioning contribution to community as a part of their responses to the open-ended questions,  $r(603) = .095, p = .02$ . That is, the two measures (i.e., qualitative and quantitative) of contribution to community significantly covary.

Analyses also revealed significant, albeit small, relationships between quantitative and qualitative indices of PYD.

Youth scores on the quantitative measure of PYD were significantly correlated with youth including the "Five Cs" of PYD in their definitions of thriving,  $r(662) = .264, p < .01$ . This covariation of qualitative and quantitative measures of PYD was significant for both males and females,  $r(266) = .219, p < .01$  and  $r(396) = .252, p < .01$ , respectively. The PYD measures were also significantly correlated for both high and low SES youth,  $r(355) = .300, p < .01$  and  $r(235) = .133, p < .05$ , respectively.

## Discussion

Theories of positive youth development (PYD) and practitioners' efforts to promote such development converge in emphasizing that the outcome of a young person's growth through adolescence, especially when that young person is involved in programs aimed at fostering PYD (Lerner, 2004; Roth & Brooks-Gunn, 2003a, 2003b), should be contributions to self, family, community and – ultimately – civil society. If both, theory and the goals of practice are to find support, then it would be beneficial if the people who participate in youth development programs – both parents and their children – agreed that a key outcome of participation in youth development programs are such multifaceted youth contributions. They would then agree that a thriving young person should manifest not only the "Five Cs" of PYD but, as well, the attribute of contribution (to self and context) (Lerner, 2004).

The results of the present research indicate, however, that parents – as key clientele of youth development programs – do not share in what seems to be a convergence among researchers, practitioners, and youth themselves in perceiving a thriving young person as either possessing attributes associated with the "Five Cs" or as making multi-faceted contributions to self and context. Through the use of qualitative information within the 4-H Study of PYD (Lerner, et al., 2005; Theokas, et al., 2005), we were able to assess the unprompted salience of constructs related to contribution and to the "Five Cs" of PYD in the conceptions of adolescents and parents about the nature of a thriving young person. We found that youth included characteristics associated with the Cs in their definitions of thriving more often than did their parents. Parents placed an emphasis on the thriving young person as happy and, as well (and consistent with at least one C), competent. Moreover, youth were much more likely to emphasize contribution in their conceptions of a thriving young person than were parents. When parents did mention terms associated with contribution, they were more likely to focus on contributions to self (e.g., staying happy, keeping healthy) than contributions to the context (i.e., family or community). Although our findings suggested that some variation exists across sex and SES, this variation does not contradict these overall generational differences.

Moreover, since the qualitative findings about contribution from the present research converge with the quantitative data about contribution available for youth within the 4-H Study data set, we believe there is evidence for the validity of our findings and thus for the assertion that there are some important implications of our results for both theory and practice.

Researchers believe that to promote both the "Five Cs," as key indicators of PYD, and contribution, as a key "outcome" of the development of these attributes of a thriving youth, there needs to be consistent support across the breadth of the social ecology of youth (Theokas & Lerner, In press). In particular, developmental assets represented by other people – for instance, parents, teachers, and leaders of youth-serving programs – should converge in



building a collaborative community for youth (Benson, Scales, Hamilton, & Sesma, 2006; Theokas & Lerner, in press). In turn, practitioners working within youth-serving programs want to be in accord with the values of the parents of the youth they are serving.

Accordingly, given the results of the present research, practitioners may need to work to better align their conceptualization of a thriving youth with those of the parents they are serving. While both groups want "good things" for youth, there are differences in how "good" is understood and, in settings where resources of time and money are limited, these different ideas may result in disagreements about priorities. In turn, researchers should investigate how the sources of theory, practice, and the views of youth converge, why there is divergence with the views of parents, and whether and how enhancing alignment among all groups can serve to benefit the overall healthy development of youth.

The present findings pertain only to the early portion of the adolescent period. If the present findings are replicated and, as well, extended to subsequent portions of adolescence, then there is an important agenda for collaboration among researchers, practitioners, parents, and young people. Together, we must build a more collaborative community for promoting positive development among the diverse young people of our nation.

## References

- Baltes, P. B., Reese, H. W., & Nesselroade, J. R. (1977). *Life-span developmental psychology: Introduction to research methods*. Brooks/Cole, Oxford: England.
- Benson, P. L., Leffert, N., Scales, P. C., & Blyth, D. A. (1998). Beyond the "village" rhetoric: Creating healthy communities for children and adolescents. *Applied Developmental Science, 2*(3), 138-159.
- Benson, P. L., Scales, P. C., Hamilton, S. F., & Sesma, A., Jr. (2006). Positive youth development: Theory, research and applications. In R. M. Lerner (Ed.), *Theoretical models of human development. Volume 1 of Handbook of Child Psychology* (6th ed.). Editors-in-chief: W. Damon & R. M. Lerner. Hoboken, NJ: Wiley.
- Eccles, J., & Gootman, J. A. (2002). *Community programs to promote youth development*. Washington, D.C.: National Academy Press.
- Fredricks, J. & Eccles, J. (In press). Is extracurricular participation associated with beneficial outcomes? Concurrent and longitudinal relations. *Developmental Psychology*.
- Jelicic, H., Bobek, D. L., Phelps, E., Lerner, R. M., & Lerner, J. V. (In preparation). Using positive youth development (PYD) to predict positive and negative outcomes in adolescence: Findings from the first two waves of the 4-H Study of PYD.
- King, P. E., Dowling, E. M., Mueller, R. A., White, K., Schultz, W., Osborn, P., Dickerson, E., Bobek, D. L., Lerner, R. M., Benson, P. L., & Scales, P. C. (2005). Thriving in adolescence: The voices of youth-serving practitioners, parents, and early and late adolescents. *Journal of Early Adolescence, 25*(1), 94-112.

Lerner, R. M. (2004). *Liberty: Thriving and civic engagement among America's youth*. Thousand Oaks, CA: Sage Publications.

Lerner, R. M., Dowling, E. M., & Anderson, P. M. (2003). Positive youth development: Thriving as a basis of personhood and civil society. *Applied Developmental Science, 7*(3), 172-180.

Lerner, R., M., Lerner, J. V., Almerigi, J., Theokas, C., Phelps, E., Gestsdottir, S., Naudeau, S., Jelicic, H., Alberts, A., Ma, L., Smith, L., Bobek, D. L., Richman-Raphael, D., Simpson, I., Christiansen, E. D., & von Eye, A. (2005). Positive youth development, participation in community youth development programs, and community contributions of fifth grade adolescents: Findings from the first wave of the 4-H Study of Positive Youth Development. *Journal of Early Adolescence, 25*, 17-71.

Roth, J. L., & Brooks-Gunn, J. (2003a). What exactly is a youth development program? Answers from research and practice. *Applied Developmental Science, 7*(2), 94-111.

Roth, J. L., & Brooks-Gunn, J. (2003b). Youth development programs: Risk, prevention and policy. *Journal of Adolescent Health, 32*(3), 170-182.

Scales, P. C., Benson, P. L., Leffert, N., & Blyth, D. A. (2000). Contribution of developmental assets to the prediction of thriving among adolescents. *Applied Developmental Science, 4*(1), 27-46.

Strauss, A. & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: Sage Publications.

Theokas, C., Almerigi, J. B., Lerner, R. M., Dowling, E. M., Benson, P. L., Scales, P. C., & von Eye, A. (2005). Conceptualizing and modeling individual and ecological asset components of thriving in early adolescence. *Journal of Early Adolescence, 25*(1), 113-143.

Theokas, C. & Lerner, R. M. (In press). Observed ecological assets in families, schools, and neighborhoods: Conceptualization, measurement and relations with positive and negative developmental outcomes. *Applied Developmental Science, 10*(2).

*This research was supported in part by a grant from the National 4-H Council. Reprint requests may be sent to Amy Alberts, Institute for Applied Research in Youth Development, 301 Lincoln-Filene Building, Tufts University, Medford, MA 02155 or to [amy.alberts@tufts.edu](mailto:amy.alberts@tufts.edu)*

---

## **Relationships Matter: A Mixed-Methods Evaluation of Youth and Adults Working Together as Partners**

**Kenneth R. Jones**  
Assistant Professor  
Youth Development Specialist  
University of Kentucky  
Lexington, KY  
[kenrjones@uky.edu](mailto:kenrjones@uky.edu)



## Relationships Matter: A Mixed-Methods Evaluation of Youth and Adults Working Together as Partners

Kenneth R. Jones  
University of Kentucky

**Abstract:** Highlights of a multi-method research study conducted to understand the perceptions and experiences of youth and adults working together within communities are shared in this article. The results revealed that the most positive youth-adult relationship experiences were those with supportive adults willing to share power with youth, those instituting youth-led endeavors where young people were allowed to demonstrate high levels of involvement and responsibility, and those involving participants who had previously worked as a community partner. Participants in Youth-Led Collaborations were more positive toward their experiences than those in Adult-Led Collaborations and Youth-Adult Partnerships. Also, participants in relationships located in rural areas indicated more positive experiences than those in urban areas. In addition, the critical elements of various youth-adult relationships were also underscored, thus identifying characteristics that have significant importance in nurturing interactions between young people and positive adults.

### Introduction

Researchers and practitioners alike are seeking ways to ensure that young people are exposed to all the essentials necessary for matriculation from childhood to competent, responsible adulthood. Scholars have reported that caring adults who are committed to the betterment of youth are a vital entity in a young person's life (Eccles & Gootman, 2002; Grossman & Johnson, 1999; Villarruel, Perkins, Borden, & Keith, 2003). However, the challenge persists in getting youth and adults to connect with one another and engage in purposeful activities. This article

highlights the findings of a multi-method research study conducted to understand the contextual differences that often occur among youth-adult relationships. The author presents the perceptions and experiences of both youth and adults working together on community projects.

## Theoretical Framework

A major barrier toward community engagement stems from the impact negative perceptions have on adults and young people (Gilliam & Bales, 2001; Guzman, Lippman, Moore, & O'Hare, 2003). Camino (2000) reported that these preconceived stereotypes often pose an impasse to thriving relationships because there is opposition to both parties' willingness to share power. Studies have reported adults' perceptions of youth as being unaware of major trends in youth development (Males, 1999; Lee, Farrell & Link 2004; Rennekamp, 1993). Furthermore, the experiences of adults when they were young are also reactants to fostering positive or negative perceptions. Adults having to recall undesirable interactions with parents, other family members and teachers often cause painful memories to resurface (Atwater, 1983; Galbo, 1983; Scheer & Unger, 1995).

In turn, Lynch and Cicchetti (1997) reported that youth perceptions of their relationship with peers were more positive than those with adults. Such negative experiences may cause youth to become reluctant to serve in a capacity where they do not feel welcomed. Many adults miss the fact that youth bring first-hand knowledge and concerns that are not accessible to adults. Youth and adults can learn from one another (Zeldin, McDaniel, Topitzes, & Calvert, 2000) through positive experiences.

Kolb (1984) defined learning "as the process whereby knowledge is created through the transformation of experiences" (p. 38). Mezirow (1997) described transformative learning as individuals allowing their experiences to change their frame of reference by considering new ways of thinking. This correlates to Smith's (1991) proposed attributes of the ideal learner being active and continually reflective on outcomes. Youth-adult partnering can serve as a medium to learn and critically reflect on viewpoints that are most efficient in attaining community empowerment. In essence, partnering may provide opportunities for youth and adults to become immersed in social and cultural experiences leading to positive forms of mutual learning.

Experience is recognized as a highly valuable resource and a defining trait in the learning process (Dewey, 1938; Knowles, 1980; Lewin, 1948; Lindeman, 1961; Mayo, 2000). Youth development researchers (Camino & Zeldin, 2003; Flanagan & Faison, 2001; Perkins, Borden, & Villarruel, 2001) have indicated that youth can gain valuable social leadership skills when fully engaged in experiential learning processes, such as those occurring when working in their communities. These experiences provide *reflection-on-action* (Merriam & Cafferella, 1999) that may be associated with responsible, civic-mindedness as youth approach adulthood. Hence, the impact of real-life experiences constitutes a degree of learning by doing, regardless of age.

## Purpose and Objectives

The purpose of this study was to examine the perceptions and experiences of youth and adults engaged in various types of youth-adult relationships involving community projects. The objectives of the study were to:

- (1) examine perceptions of individuals engaged in youth-adult relationships at the community level;
- (2) examine experiences of youth and adults working together as partners; and
- (3) identify unique characteristics of different types of youth-adult relationships.

## Methods and Procedures

This study included a convenience sample (Patton, 1990) of youth and adults who participated in the *Engaging Youth, Serving Community* (EYSC) Initiative (see <http://www.fourhcouncil.edu/RuralYouthDevProgram.aspx>) in the Northeastern (U.S.) Region. The Initiative, administered by the USDA/Cooperative State Research, Education and Extension Service (CSREES) and the National 4-H Council, provided rural youth with enhanced opportunities to partner with adults to address local issues. Youth and adults worked together on community service projects that sought to improve levels of youth leadership and adult support.

States participating in the EYSC Initiative were: Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Vermont, and West Virginia. In addition, participants from the Philadelphia area were recruited for this project to provide an urban sample. Two groups (i.e., Camden, NJ and Haddington, PA [a section of West Philadelphia]) were selected because they were in the beginning stages of bringing youth and adults together to promote community change.

A concurrent triangulation design utilizing both quantitative and qualitative data sources was employed. Quantitative data were analyzed using descriptive statistics, t-tests, and analyses of variance (ANOVA). The data were collected from 108 participants in groups from 10 states and 12 communities (10 rural, two urban) using the *Involvement and Interaction Rating Scale* (Jones & Perkins, 2005), which measured participants' perceptions of their experiences working together. The rating scale measured three constructs: youth involvement, adult involvement, and youth-adult interaction. Qualitative data were collected using observations, semi-structured interviews, and multiple-case study analyses.

Post-hoc reliability of the rating scale yielded an overall Cronbach's of .94. Reliability coefficients for each of the three constructs of the rating scale were: .83 (Youth Involvement), .84 (Adult Involvement), and .87 (Youth-Adult Interaction). Inter-coder agreement was used to determine the validity of the researcher's selecting of themes for the interviewed participants' responses. Inter-rater reliability was also utilized to examine correlations between the researcher's ratings and participants' ratings of their experiences (Kappa = .79).

The study targeted five types of groups located along the Youth-Adult Relationships Continuum. The five relationships are listed in Table 1.

**Table 1**

The Five Types of Youth-Adult Relationships

Adult-Centered Leadership	Programs that are conceived and driven completely by adults, without employing any youth decision-making
Adult-Led Collaboration	Programs or situations where adults provide guidance for youth; youth have some input in decision making, but adults make final decisions
Youth-Adult Partnership	Point of stasis where youth and adults have equal chances in utilizing skills, decision-making, mutual learning and independently carrying out tasks to reach common goals
Youth-Led Collaboration	Youth primarily generate ideas and make decisions while adults typically provide assistance when needed
Youth-Centered Leadership	Programs or activities led exclusively by youth, with little or no adult involvement

Note. For more specific details, see Jones (2004). *An assessment of perceptions and experiences in community-based youth-adult relationships*. Unpublished doctoral dissertation, The Pennsylvania State University, University Park, PA.

Adult leaders of the participating groups were asked to indicate the type of relationship of their groups based on the Youth-Adult Relationships Continuum presented in Figure 1. The adult leaders were provided detailed descriptions of each relationship to assist them in accurately classifying their groups. As a result, five (5) groups were classified as Adult-Led Collaborations, five (5) as Youth-Adult Partnerships and two (2) as Youth-Led Collaborations. However, this does not confirm that these three are the only relationships existing within communities. Despite Adult-Centered and Youth-Centered Leadership relationships not being part of these analyses, there is evidence that they are prevalent at the community level.

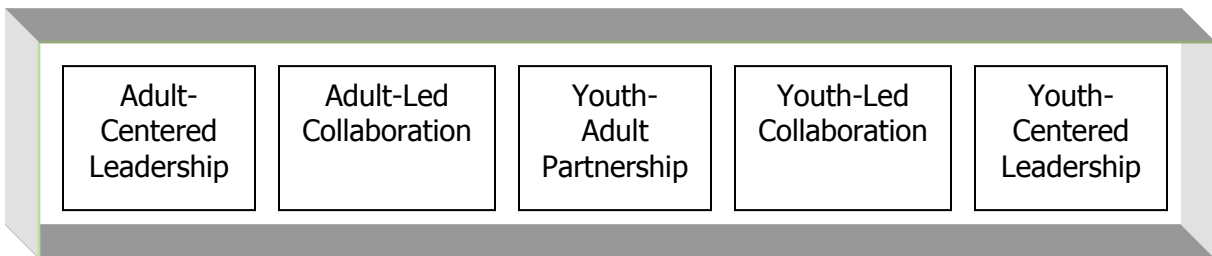


Figure 1. Youth-Adult Relationships Continuum

## Findings

The demographic characteristics presented in Table 2 include the youth and adults who participated in this study. These characteristics are described to provide contextual information on the findings that were revealed through the analyses.

**Table 2**  
Demographic Characteristics of Youth and Adult Participants (N = 108)

Demographic Variable	<i>f</i>	%
Age Classification		
Youth (13-18)	55	51
Adult (19 and older)	53	49
Gender		
Female		
Youth	33	30.6
Adults	42	38.9
Male		
Youth	22	20.4
Adults	11	10.1
Description of Community		
Rural/farm	44	40.8
Suburban	17	15.7
Urban/City	47	43.5
First-time partner with youth/adults		
Yes	39	36.1
No	69	63.9

### Perceptions of Participants

In regard to influences of the type of relationships, an analysis of variance determined a statistically significant difference between participants in Adult-Led Collaborations (M=6.74) and those in Youth-Led Collaborations (M=8.00), with youth involvement being higher in the latter. Mean scores indicated that participants in Youth-Led Collaborations had more positive perceptions of the level of adult involvement and youth-adult interaction within their groups than participants in Adult-Led Collaborations and Youth-Adult Partnerships (Table 3).



**Table 3**

Participants' Youth Involvement, Adult Involvement and Youth-Adult Interaction Perceptions by Relationship Category

Perceptions	Adult-Led Collaboration		Youth-Adult Partnership		Youth-Led Collaboration		<i>F</i>	<i>p</i>
	Mean	<i>SD</i>	Mean	<i>SD</i>	Mean	<i>SD</i>		
Youth Involvement	6.74* (50)	1.21	7.34 (27)	1.56	8.00* (15)	1.11	5.92	.004**
Adult Involvement	7.42 (53)	1.66	7.43 (29)	1.72	8.06 (17)	1.25	1.09	.341
Youth-Adult Interaction	6.77 (49)	1.37	7.00 (29)	1.39	7.53 (15)	1.03	1.87	.160

*Note.* These relationship categories were based on the adult leaders' classification of their groups. Scale ranged from 1-10. \* Mean values were statistically significant only between individuals in Adult-Led and Youth-Led Collaborations. \*\*  $p < .01$ .

An analysis of variance found significant differences between the perceptions of adults in Youth-Adult Partnerships and Adult-Led Collaborations (Table 4). Adults in Youth-Adult Partnerships had more positive perceptions of youth involvement ( $M=7.85$ ) than adults in Adult-Led Collaborations ( $M= 6.64$ ). Also, adults in Youth-Adult Partnerships ( $M= 7.69$ ) had more positive perceptions of youth-adult interaction than those adults in Adult-Led Collaborations ( $M=6.63$ ). Adults in Youth-Led Collaborations were the most positive, although there was no revealed significant difference.

**Table 4**

Adult Participants' Youth Involvement, Adult Involvement and Youth-Adult Interaction Perceptions by Relationship Category

Perceptions	Adult-Led Collaboration		Youth-Adult Partnership		Youth-Led Collaboration		<i>F</i>	<i>p</i>
	Mean	<i>SD</i>	Mean	<i>SD</i>	Mean	<i>SD</i>		
Youth Involvement	6.64* (23)	1.11	7.85* (15)	1.43	8.00 (6)	1.44	5.34	.009**
Adult Involvement	7.53 (26)	1.31	8.06 (16)	1.46	8.14 (7)	.98	1.07	.351
Youth-Adult Interaction	6.63* (21)	1.02	7.69* (16)	1.25	7.84 (6)	.56	5.75	.006**

*Note.* Scale ranged from 1-10. \* Mean values were statistically significant only between individuals in adult-led collaborations and youth-adult partnerships. \*\*  $p < .01$ .

Groups from rural areas consisted primarily of participants who were significantly more positive (M=7.50) toward youth involvement than those participants from urban areas (M=6.67). Although there was no significance in relation to the constructs, adult involvement and youth-adult interaction, it is of interest to note that participants in rural areas had more positive ratings on these areas as well (Table 5).

**Table 5**

Youth Involvement, Adult Involvement, and Youth-Adult Interaction Perceptions by Place of Residence

Perceptions	Rural		Suburban		Urban		F	p
	Mean	SD	Mean	SD	Mean	SD		
Youth Involvement	7.50* (41)	1.32	7.16 (15)	1.49	6.67* (36)	1.29	3.78	.027**
Adult Involvement	7.75 (42)	1.43	7.59 (17)	1.71	7.28 (40)	1.77	.879	.418
Youth-Adult Interaction	7.30 (44)	1.18	6.83 (13)	1.33	6.59 (36)	1.46	2.98	.056

*Note.* Scale ranged from 1-10. \* Mean values were statistically significant only between rural and urban groups. \*\*  $p < .05$ .

Although adults provided more positive ratings than youth towards the constructs (i.e., youth involvement, adult involvement and youth-adult interaction), an independent t-test found no significant differences between youth and adult perceptions on these constructs. Also, there were no statistically significant differences between youth participants across each of the three youth-adult relationships.

### Experiences of Youth and Adult Participants

Four groups were selected, based on their location and progress with their community project, for observations and interviews to assess the participants' experiences of working together as partners. All of the adult participants had worked with youth at some point in time and were accepting of youth leadership. However, nearly all (8 of 9) of the youth who were interviewed noted that despite negative experiences (e.g., adults "taking over"), they encountered adults who were very supportive. All 18 of the interviewed participants (nine youth and nine adults) indicated a willingness to participate in a similar endeavor in the future.

In this study, participants seemed cautious in openly expressing themselves during meetings. The researcher observed youth, in trainings with adults, as being very reluctant to participate fully in group discussions. In one group, the youth often seemed intimidated by adults and appeared to act as though their responses would not be taken seriously. On the other hand, some adults were also hesitant to share their perspectives because they did not want to offend the youth. Obviously, a comfort level was not established with peers of the same or similar ages, which may have caused some discomfort when participants came together for a joint training.

Youth in Adult-Led Collaborations appeared to need more time to reach the point of actually seeing themselves as leaders, while adults needed to develop and utilize strategies that encouraged youth participation. Within the three Adult-Led Collaborations that were observed, the youth appeared ill-prepared for the expected level of responsibility and decision-making and therefore were dependent on adult guidance. The adults, in contrast, were disturbed by not being able to successfully perpetuate youth voice (i.e., opinions, input) and leadership. Young people in the Youth-Led Collaboration demonstrated assertiveness, leadership and a fervency to take on responsibilities. This observed relationship displayed a youth-driven model where the youth had ownership in program activities and felt empowered serving in meaningful decision-making roles. The adults were willing to take on a more supportive role, thus relinquishing some power to young people, while encouraging youth leadership.

### Characteristics of Various Youth-Adult Relationships

Several characteristics surfaced through observations and the interviews as critical elements of youth-adult relationships. Those elements were identified as adult support, civility/mutual respect, community obligation, decision-making, mutual learning, youth responsibility, and youth voice. Table 6 includes the critical elements based on data collected from all participants using the *Involvement and Interaction Rating Scale*, observations of four selected groups, and interviews of nine youth and nine adult participants.

**Table 6**  
 Characteristics of Adult-Led Collaborations (Adult Driven)  
 vs. Youth-Led Collaborations (Youth-Driven)

Adult-Led Collaborations	Youth-Led Collaborations
High levels of adult involvement/support	High levels of adult involvement/support
High levels of civility/mutual respect	High levels of civility/mutual respect
Moderate level of community obligation <sup>1</sup>	Moderate level of community obligation <sup>1</sup>
Low youth decision-making	High level of youth decision-making
Low youth responsibility	High youth responsibility
Little, if any, mutual learning	Little, if any, mutual learning
Youth ideas considered by adults	Youth ideas highly valued by adults
Youth voice <sup>2</sup> solicited/considered by adults	Youth voice <sup>2</sup> solicited/utilized by adults

Note. "1" = *Community Obligation* references youth and adults committed to making an impact on the entire community (level determined by participants' enthusiasm towards community and the scope of their project); "2" = *Youth Voice* refers to youth sharing opinions and providing input during group discussion.

The above-listed elements may help determine which relationship types are most effective and appropriate for certain community projects. Though some characteristics are more specific to one particular relationship, these critical elements can be implemented within community youth

programs and other collaborative efforts to ascertain whether young people are receiving the most valuable experiences through participatory learning and positive relationships with adults.

## Conclusions and Discussion

All participants in Youth-Led Collaborations were the most positive toward youth involvement. Perhaps these participants were more positive because of the passion towards their project and the meaningful roles that were afforded to the young people. The adults indicated that they purposely kept their involvement to a minimum in order to maximize youth participation. Given this situation, the youth apparently provided positive ratings of the youth-adult interaction because they had a major role in the project, while the adults were positive towards youth taking on this responsibility and exerting their leadership potential.

Adults in Youth-Adult Partnerships had more positive perceptions than those in Adult-Led Collaborations. One potential reason for this finding may be that the adults in these groups sincerely believed that they had achieved a genuine partnership; therefore, they believed that youth involvement was high and their interactions with young people were authentically positive. However, the youth's views of youth involvement and youth-adult interaction were less buoyant. Instead, they perceived their decision-making roles as minimal, at best, thus indicating that a "partnership" did not fully exist.

Groups in rural areas had more positive perceptions toward youth involvement than those in urban communities. This was due, in part, because the rural groups were targeted specifically for participation in the EYSC initiative and were considered ready for this type of endeavor. Another possible explanation is that the rural sample (unlike the urban groups) involved youth who were involved in 4-H activities for several years prior to this project, and the youth knew the adults involved in their groups.

Observations of group dynamics and interviews of participants were used to assess youth and adult engagement. One weakness reported by adults and youth was that youth voice and decision-making were not always utilized to capacity. While civility/mutual respect was prevalent and youth voice was solicited in both Youth-Led and Adult-Led Collaborations, the level of youth voice was higher, more valued and readily utilized in Youth-Led Collaborations. Considering that adult support was observed as high among all groups, adult practitioners and volunteers may wish to direct their support toward encouraging youth to engage in dialogue, develop critical thinking skills, and decision making skills. For example, involving youth in professional development training components may be a worthy part of a youth organization's mission.

Those youth and adult participants indicating previous involvement in partnerships appeared more comfortable, while those encountering their first youth-adult community project seemed more uneasy. The youth, in particular, appeared intimidated by adults to some degree. Hence, youth-service providers recruiting both experienced adults and experienced youth to work with younger youth and novice adult volunteers may prove beneficial in strengthening youth-adult partnering ventures.

Some elements revealed in this study were apparently unique to specific relationships. For example, mutual learning was not widespread in either type of relationship that was observed and analyzed, yet it has been described as imperative to a true Youth-Adult Partnership (see Camino, 2000). Evidently, a situation where youth and adults equally serve as teachers and

participatory learners exists when both have the opportunity to utilize their skills and disseminate knowledge to one another. Theoretically, this would most likely occur where youth and adults are contributors as well as receivers in an educative process. Youth-service providers may want to consider the critical elements of various relationships when designing programs to endow young people with the wherewithal to partner with adults.

The projects of each observed group targeted primarily those areas of the community that participants were most familiar with (e.g., schools attended by the youth, facilities utilized by the group on previous occasions), which indicated a moderate level of community obligation. A high level of community obligation would be reflective of a project that is beneficial on a larger scale (i.e., the entire county or multiple schools). In addition, not all participants were as enthusiastic about the project's benefit to the community. For example, based on the author's observations, several youth in the urban groups seemed to have less of a vested interest, due to their project work often taking place in less proverbial neighborhoods.

Youth-serving organizations must begin to promote the generation of social capital, particularly in urban areas, that mirrors the stronger community connectedness than may exist in smaller, more rural localities. Larger urban communities often lack the condition where all neighbors know one another. Moreover, intergenerational relationships may decrease negative perceptions toward differences by allowing people to acknowledge and embrace their commonalities (Allport, 1954; Pettigrew, 1998; Swisher & Whitlock, 2004). Many youth will have their first encounter with a partnering effort at the Adult-Led Collaborative level. Consequently adults must practice more active facilitation and patience in encouraging the youth to arrive at a point where they feel comfortable serving as a full-fledged community partner.

### Limitations

Limitations of this study were as follows:

1. The generalizability of the results does not extend beyond the participants in this sample.
2. The researcher made 2-4 visits to each group. Although points of saturation were reached within the qualitative analyses, a more thorough evaluation of group interaction may have been possible through additional visits.

### Recommendations

It is important that youth programs have an intentional structure that facilitates positive youth-adult interaction (Jekielek, Moore, & Scarupa, 2002). Youth service providers should target adults who bring experience, enthusiasm, comfort in power-sharing and feelings of personal closeness in working with youth (Dubois & Neville, 1997). Training for adults before and during their work together with youth partners would be helpful, especially for adults who are less skilled. Adults, along with young people who have previous experience, could also benefit from learning new techniques that strengthen relationships. Youth-serving organizations need to ensure that young people have access to a number of caring adults that can serve as mentors, as well as community allies.

## Recommendations for Further Research

Based on the findings of this study:

1. Researchers should conduct similar studies using a larger sample that includes a broader range of organizations engaged in building youth-adult relationships (and existing within different contexts (e.g., schools, faith-based institutions)).
2. Longitudinal studies should be conducted to determine if the perceptions of youth and adults change over time when working together as partners.
3. Integrated qualitative and quantitative procedures are needed to investigate the complexities and dynamics of various types of youth-adult relationships.
4. Future research should consider testing the components of group interaction (i.e., Intergroup Contact Theory; see Allport, 1954)) to examine factors that influence the power dynamics associated with the segregation between youth and adults.

## Summary

The major conclusion drawn from this study is inclusive at best, offering strong evidence for more empirical inquiries. Previous qualitative inquiries providing exploratory research on youth-adult relationships and local partnerships have provided a plethora of background information to the theoretical framework of this investigation. Furthermore, this research provides a better understanding of the role and effectiveness of youth-adult interactions in communities. As additional research efforts on the benefits of youth-adult partnerships and other forms of positive relationships are pursued, youth and adults will become more capable of valuing one another and working together on behalf of their communities.

## References

- Allport, G. W. (1954). *The nature of prejudice*. New York, NY: Doubleday Books.
- Atwater, E. (1983). *Adolescence*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Camino, L. A. (2000). Youth-adult partnerships: Entering new territory in community work and research. *Applied Developmental Science, 4*, 11-20.
- Camino, L., & Zeldin, S. (2003). From periphery to center: Pathways for youth civic engagement in the day-to-day life of communities. *Applied Developmental Science, 4*.
- Dewey, J. (1938). *Experience and education*. New York, NY: Touchstone.
- Dubois, D. L., & Neville, H. A. (1997). Youth mentoring: Investigation of relationship characteristics and perceived benefits. *Journal of Community Psychology, 25*, 227-234.
- Eccles, J. S., & Gootman, J. A. (Eds.). (2002). *Community programs to promote youth development*. Committee on Community-Level Programs for Youth. Washington, DC: National Academy Press.
- Flanagan, C. A. & Faison, N. (2001). *Youth civic development: Implications of research for social policy and programs*. (Social Policy Report, 15(1) of the Society for Research in Child Development). Available online at: <http://www.srpd.org/sprv15n1.pdf>

Galbo, J. (1983, Summer). Adolescents' perceptions of significant adults. *Adolescence*, 18, 417-427.

Gilliam, F. D., Jr. & Bales, S. N. (2001, July). *Strategic frame analysis: Reframing America's youth*. (Social Policy Report, 15(3) of the Society for Research in Child Development). Available online at: <http://www.srcd.org/sprv15n3.pdf>

Grossman, J. B., & Johnson, A. (1999, June). Assessing the effectiveness of mentoring programs. In J.B. Grossman, (Ed.), *Contemporary issues in mentoring*. Public Private Ventures. Available online at: [http://www.ppv.org/pdf/cimentoring/cim\\_3.pdf](http://www.ppv.org/pdf/cimentoring/cim_3.pdf)

Guzman, L., Lippman, L., Moore, K. A., & O'Hare, W. (2003, July). *How children are doing: The mismatch between public perception and statistical reality* (Research Brief #2003-12). Washington, DC: Child Trends.

Jekielek, S. M., Moore, K. A., Hair, E. C., & Scarupa, H. J. (2002, February). *Mentoring: A promising strategy for youth development* (research brief). Washington, DC: Child Trends.

Jones, K. R. (2004). *An assessment of perceptions and experiences in community-based youth-adult relationships*. Unpublished doctoral dissertation, The Pennsylvania State University, University Park.

Jones, K.R. & Perkins, D.F. (2005). Determining the quality of youth-adult relationships within community-based youth programs. *Journal of Extension*, 43(5). Available online at: <http://www.joe.org/joe/2005october/a5.shtml>

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.

Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to andragogy*. (2<sup>nd</sup> ed.). New York, NY: Cambridge Books.

Lee, B. A., Farrell, C. R., & Link, B. G. (2004). Revisiting the contact hypothesis: The case of public exposure to homelessness. *American Sociological Review*, 69, 40-63.

Lewin, K. (1948). *Resolving social conflicts: Selected papers on group dynamics*. Lewin, G. W. (Ed). New York, NY: Harper and Row.

Lindeman, E. (1961). *The meaning of adult education*. New York, NY: Harvest House.

Lynch, M. & Cicchetti, D. (1997). Children's relationships with adults and peers: An examination of elementary and junior high school students. *Journal of School Psychology*, 35, 81-100.

Mayo, M. (2000). Learning for active citizenship: Training for and learning from participation in area regeneration. *Studies in the Education of Adults*, 32, 22-35.

Males, M. (1999). *Framing youth: Ten myths about the next generation*. Monroe, ME: Common Courage Press.

Merriam, S. B., & Caffarella, R. S. (1999). *Learning in adulthood: A comprehensive guide* (2<sup>nd</sup> ed.). San Francisco, CA: Jossey-Bass.

Mezirow, J. (1997). Transformative learning: Theory to practice. In P. Cranton (Ed.), *Transformative learning in action: Insights from practice. new directions for adult and continuing education*, 74, 5-12, San Francisco, CA: Jossey-Bass.

Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2<sup>nd</sup> ed.). Newbury Park, CA: Sage.

Perkins, D. F., Borden, L. M., & Villarruel, F. A. (2001). Community youth development: A partnership for change. *School Community Journal*, 11, 39-56.

Pettigrew, T. F. (1998). Intergroup contact theory. *Annual Review of Psychology*, 49, 65-85.

Rennekamp, R. (1993). Double standard for youth involvement. *Journal of Extension*, 31. Available online at: <http://www.joe.org/joe/1993fall/f2.html>

Scheer, S. D., & Unger, D. G. (1995). Parents' perceptions of their adolescence: Implications for parent-youth conflict and family satisfaction. *Psychological Reports*, 76, 131-136.

Smith, R. M. (1991, April). How people become effective learners. *Adult Learning*, 2, 11-13.

Swisher, R., & Whitlock, J. (2004). How neighborhoods matter for youth development. In S. F. Hamilton, & M. A. Hamilton (Eds.), *The youth development handbook: Coming of age in America*. Thousand Oaks, CA: Sage.

Villarruel, F. A., Perkins, D. F., Borden, L. M., & Keith, J. G. (2003). *Community youth development: Practice, policy and research*. Thousand Oaks, CA: Sage.

Zeldin, S., McDaniel, A., Topitzes, D., & Calvert, M. (2000). *Youth in decision-making: A study on the impact of youth on adults and organizations* (Report). Chevy Chase, MD: Innovation Center for Community and Youth Development



---

## **Supporting Social and Cognitive Growth Among Disadvantaged Middle-Grades Students in TASC After-School Projects**

**Christina A. Russell**  
Senior Research Associate  
[crussell@policystudies.com](mailto:crussell@policystudies.com)

**Elizabeth R. Reisner**  
Principal  
Policy Studies Associates  
Washington, DC  
[ereisner@policystudies.com](mailto:ereisner@policystudies.com)



## Supporting Social and Cognitive Growth Among Disadvantaged Middle-Grades Students in TASC After-School Projects

Christina A. Russell and Elizabeth R. Reisner  
Policy Studies Associates

**Abstract:** The field of after-school programming remains rife with unanswered questions. What constitutes quality in after-school programs? Are after-school opportunities valuable for participants regardless of their quality? Are differences in quality associated with differences in participant benefit? This sub-study of the longitudinal evaluation of The After-School Corporation (TASC) looks at how after-school opportunities with varying features affect urban middle-grades (6-8) adolescents who live in impoverished circumstances. Supported by the William T. Grant Foundation, the study explores the associations between after-school project features and the social and cognitive outcomes of disadvantaged middle-grades participants in TASC programs. The study relies on data collected during the 2001-02 and 2002-03 school years in eight TASC projects serving middle-grades students.

### Theoretical Foundation

Recent research on youth development increasingly concludes that, especially for disadvantaged youth, high-quality out-of-school-time opportunities are very important. These opportunities help youth overcome risk factors that might otherwise impede healthy development and also introduce positive opportunities, experiences, and supports. From this literature, it is possible to identify program features and practices that are associated with positive youth-development outcomes. For example, the National Research Council's Committee on Community-Level Programs for Youth (Eccles & Gootman, 2002) identified eight features of positive developmental settings: physical and psychological safety; appropriate structure; supportive relationships; opportunities to belong; positive social norms; support for efficacy and mattering (making a difference); opportunities for skill-building; and integration of family, school, and community efforts. Likewise, existing evidence indicates that structural features of after-school programs affect staff practices. For example, Rosenthal and Vandell (1996) found that:

- higher child-staff ratios are associated with more negative staff-child interactions;
- larger group sizes are associated with lower child ratings of program climate, emotional support, and support for autonomy and privacy;
- higher levels of staff education are associated with fewer negative staff-child interactions.

This study explored the associations between after-school project features and the social and cognitive outcomes of disadvantaged middle-grades (grades 6-8) participants in after-school programs supported by The After-School Corporation (TASC) in New York City. Middle-grades youth may be receptive to external supports and opportunities because they are old enough to understand and pursue their own interests, but young enough to change course easily toward a more positive future if persuaded of the value of doing so. Evidence from sources such as the TASC evaluation suggests that after-school services can particularly benefit this age group by promoting high levels of school attachment (as measured by school attendance) and, to a lesser extent, improvements in achievement (Reisner, White, Russell & Birmingham, 2004).

We identified for this study five dimensions of cognitive and social outcomes: students' attachment to the TASC project, relationships between youth and adults, peer relationships, cognitive development, and attachment to school. For each of these five outcome areas, we explored associations with the following features that can directly shape the out-of-school time experiences of youth and provide the structure necessary to maintain high-quality relationships and activities:

- **Practices to promote positive relationships**, including positive staff-youth relationships, positive peer relationships, and connections with families and the community
- **Rich content-based program activities**, including a mix of academic and non-academic (physical and recreational) enrichment activities that build skills
- **Learning- and mastery-oriented content-delivery strategies** that provide both structured and unstructured learning opportunities and promote participant autonomy, choice, and leadership
- **Staff qualifications and support**, including staff education and training, expertise, turnover, and supports
- **Group size and configuration**, including youth-staff ratio and group size
- **Program resources**, including financial resources, space and facilities, equipment and materials, and accessible location
- **Program partnerships**, linkages, and connections, including relationships with parents, participants' schools, communities, and membership in a larger network of programs

The process and content features identified by the study as core elements of effective programs reflect evidence from youth-development research and also from teaching and learning research about the content and instructional strategies that promote learning. McLaughlin (2000) observed that after-school programs that capture youths' interest and promote their learning are "not happenstance." Instead, positive outcomes emerge when adults deliberately create opportunities in which both the content of activities and the instructional processes are "knowledge-centered" and "youth-centered." More generally, researchers investigating human

learning point to the importance of providing learners with rich content-based experiences, led by instructors or coaches who encourage mastery and use both structured and unstructured teaching strategies to promote learning (Bransford, Brown, & Cocking, 1999).

## Method

### *Sample*

Data was collected from eight TASC after-school projects that served middle-grades youth in the 2002-03 school year. The eight projects in this study had operated since at least 1998-99 in space provided by New York City public schools. All eight projects employed TASC's model of program services, including sponsorship and operation by a community-based or other nonprofit organization, employment of a full-time project coordinator, regular communications between the after-school project and the host school, extensive opportunities for staff development, and focus on participants' academic and social growth. However, the projects varied in terms of project goals, approaches, and services offered in ways that this study hypothesized were related to students' cognitive and social outcomes. For example, some projects offered a comprehensive list of activities from which participants could choose, including arts-based and academic enrichment activities focused on mastery. In contrast, other projects offered a more traditional after-school curriculum of homework help supplemented by sports or games.

The eight schools hosting the TASC projects in this study served some of the most disadvantaged middle-grades students in New York City, as illustrated in Exhibit I. In particular, more students in these schools than citywide were eligible for free- or reduced-price lunch and were non-white. Fewer than a third of the students in the schools performed at grade level on the city and state English Language Arts (ELA) and math assessments.

## Exhibit 1

Characteristics of All New York City Public Middle Schools,  
Schools Hosting TASC Study Sites, and TASC Participants,  
2001-02, in Percents

Youth Characteristic	Students citywide <sup>a</sup> (N=191,260)	Students in study schools (N=8,248)	TASC participants <sup>b</sup> (N=1,219)
<b>Free/reduced-price lunch</b>			
Eligible for free/reduced-price lunch	70	78	83
Not eligible for free/reduced-price lunch	30	22	17
<b>Race/ethnicity</b>			
Hispanic	38	43	40
African American	34	36	34
Asian or Pacific Islander	12	12	14
White	16	9	12
<b>English Language Learners</b>			
Yes	13	12	13
No	87	88	87
<b>Recent immigrant</b>			
Yes	7	6	8
No	93	94	92
<b>Special education</b>			
Special education student	10	13	9
Not special education student	90	87	91
<b>Gender</b>			
Male	51	52	51
Female	49	48	49

Exhibit reads: Eighty-three percent of TASC project participants in the study qualified for free- or reduced-price lunch, compared to 70 percent of middle-school students citywide and 78 percent of the students enrolled in the study schools.

<sup>a</sup> Citywide figures are from schools designated by the New York City Department of Education as middle schools.

<sup>b</sup> Participant-level data are not available for one project.

### **Data collection**

Surveys were administered to program participants (N=399 in eight projects) in spring 2003, and to site coordinators (N=8), host school principals (N=6), and program staff (N=126 in seven projects) in spring 2002. We also relied on the student information system of the New York City Department of Education (DOE) for data on school attendance, end-of-year achievement test scores, and participant characteristics. Analyses focused on changes in student-level educational-performance data between the 2000-01 and 2001-02 school years. These data were available for 726 students in English Language Arts and 853 students in mathematics in seven of the eight study sites. TASC program attendance records for 2001-02

were available for 1,219 participants in seven of the eight study sites. In addition, we conducted site visits to each of the eight projects during the 2002-03 school year, which included structured observations of program activities and interviews with site coordinators.

### *Analysis*

Data analysis focused on identifying practices that varied across sites in order to determine the particular practices that were associated with achieving a notably more positive outcome at one or more sites relative to other sites.

To measure variation across sites, we examined the distribution of indicators of each outcome, program practice, or project characteristic to determine its prevalence in the eight middle-grades projects. If the indicator was not prevalent in at least 20 percent of cases, it was not considered for future analysis, because it was not sufficiently common to warrant a search for patterns of association. Conversely, an indicator variable was dropped if it was present in more than 80 percent of the cases because it was deemed to be too prevalent to permit distinctions among sites. Analysis of survey responses categorized the mean student response to each attitudinal scale as a positive response if respondents rated the items in the scale at the midpoint of the scale range or higher (e.g., on a scale where the possible scores ranged from 4 to 16, a mean response of 10 or higher was classified as positive).

To establish the variation across sites and enhance the interpretation of the differences in data by site, we compared the prevalence of the indicator at each site to its prevalence across the other seven sites in order to compute an effect size. When differences were statistically significant, we interpreted an effect size of +0.20 as a notably positive difference between an individual project and the other projects, and -0.20 as a notably negative difference.<sup>8</sup>

We then used these effect-size calculations to look for patterns across sites and to determine the project practices and characteristics associated with particular youth outcomes. For each outcome measure analyzed, we looked for practices and characteristics that were common (based on a notable effect size, or the presence or absence of a dichotomous variable) to the projects demonstrating a notably positive effect size on that outcome and, in particular, practices and characteristics that were present in those projects but not in projects with notably negative effect sizes on the outcome.

---

<sup>8</sup> An effect size estimates the size or importance of differences. Statistical significance assesses whether there is a difference that is greater than would be expected by chance. However, when large samples are used, minor differences can meet the threshold of statistical significance. The study team used differing methods to estimate the effect size for continuous measures and for dichotomous measures, as appropriate (Lipsey & Wilson, 2001). The statistical literature contains extensive discussion about how to interpret effect sizes of different magnitudes. The standard works suggest that an effect size of 0.20 is small, 0.50 moderate, and 0.80 large (Cohen, 1977). However, some researchers have pointed to the need to calibrate the interpretation of effect sizes to the expected impact of the program being studied. These authors often point to the medical study of the benefits of aspirin in reducing heart attacks, where the effect size was 0.03, yet was deemed important enough to influence health policy (Prentice & Miller, 1992). This study has adopted a threshold of 0.10 for a small effect size in analysis of the association between participation in a TASC after-school project and changes in school attendance.

## Findings

The eight projects included in this study varied in important ways on each of the student outcome measures analyzed, as summarized in Exhibit 2.

### Exhibit 2

Variation on Participant Outcome Measures

Outcome	Average	Most positive effect size	Most negative effect size	Range	Number of projects with effect sizes that are:	
					Notably positive <sup>a</sup>	Notably negative
<b><i>Attachment to program</i></b>						
Sense of community (based on student survey scale)	56%	0.54	-0.48	1.01	2	2
After-school attendance	63%	1.27	-0.98	2.25	4	2
<b><i>Staff-youth relationships</i></b>						
Trust of staff (student survey scale)	76%	0.34	-0.30	0.64	1	1
Students interact with staff constructively during activities (based on structured observations of programs)	74%	0.34	-0.32	0.66	1	0
<b><i>Peer relationships</i></b>						
Peer aggression (student survey scale)	77%	0.31	-0.18	0.49	2	0
Youth interact cooperatively during activities (structured observations)	70%	0.54	-0.65	1.19	3	3
Youth have warm, friendly interactions during activities (structured observations)	71%	0.53	-1.02	1.55	2	2
<b><i>Cognitive development</i></b>						
Academic benefits (student survey scale)	73%	0.26	-0.44	0.71	1	1
Change in math performance <sup>b</sup>	1.51	1.39	-0.51	1.90	5	1
Change in ELA performance <sup>c</sup>	0.62	1.38	-0.88	2.26	3	1
<b><i>Attachment to school</i></b>						
Change in school attendance <sup>d</sup>	-0.69%	0.13	-0.06	0.19	2	0

<sup>a</sup> For all outcomes except school attendance, notably positive is defined as a difference with a Z-score that is statistically significant at the  $p < 0.05$  level and an effect size of  $+ .20$  or greater. Notably negative is defined as a statistically significant difference with an effect size of  $- .20$  or less. For school attendance,  $+ .10$  and  $- .10$  were considered notably positive and notably negative effect sizes.

<sup>b,c</sup> Gains on assessments are measured in terms of changes in the percent of the possible scale score points between 2000-01 and 2001-02.

<sup>d</sup> Change in school attendance rates is measured for participants between 2000-01 and 2001-02.

We measured attachment to the TASC program through program attendance rates and an attitudinal scale measuring students' perceptions of the sense of community in the program (developed by the Child Development Project, Developmental Studies Center). In the after-school projects where middle-grades students demonstrated notably positive attachment to the TASC program, we found certain common policies and practices. In particular, project staff set

clear goals and expectations for students, encouraging them to take ownership of their after-school experience. The projects also set policies that encouraged regular program attendance, and offered a rich array of activities to foster student engagement. These projects gave participants opportunities to choose activities and supported social development activities such as conflict resolution and life skills instruction. In addition, these projects enjoyed a strong relationship with their host school, in which after-school staff, for example, discussed student progress with school-day teachers and involved the school community in after-school events. One site coordinator summed up this philosophy by saying, "It's important that kids see you as a resource in the school—as a part of the school, but something different."

Staff instructional practices were important in the after-school projects that demonstrated notably positive staff-youth relationships, as measured through students' reports of their level of trust of the after-school staff (survey scale developed by the Child Development Project, Development Studies Center) and through study team observations of constructive interactions between staff and students. We found positive staff-youth relationships in sites where the project staff modeled positive behavior for participants and actively promoted student mastery of the skills or concepts presented in activities. In these sites, project staff listened attentively to participants and frequently provided individualized feedback and guidance during project activities.

Participating in after-school projects provides middle-grades youth the opportunity to socialize and develop friendships, opportunities that may otherwise be in short supply. One site coordinator noted that, "Kids are less on edge about friendship groups and who they hang out with. I really feel it is a safe haven in that way." We measured peer relationships through observations of cooperative and friendly interactions between youth, and through a peer aggression attitudinal survey scale (modified from [Orpinas & Frankowski, 2001](#)). In the after-school projects with notably positive peer relationships, project activities regularly included social development and athletic activities that provided students with the opportunity to interact in informal team-oriented ways. These projects often combined instruction in athletic skills with encouragement of positive behaviors such as self-discipline. In addition, project staff established clear expectations for interactions that were mature and respectful. One site coordinator emphasized that he communicates to youth that "this is their program. You work on it. It's letting kids understand that it is not us that dictate everything that goes on in the program."

We measured cognitive development outcomes through participant reports of academic benefits and through analyses of student performance on the New York city and state mathematics and ELA assessments. We used a statistical model to estimate the difference between a students' expected and actual change in performance from 2000-01 to 2001-02, controlling for demographic characteristics as well as baseline achievement.<sup>9</sup> The after-school projects in which participants experienced the most positive cognitive development outcomes tended to have an especially strong relationship with the host school, in some cases sharing staff. For instance, in one project, a school dean served as an assistant director of the after-school program, creating continuity in disciplinary expectations as well as in academics. Her familiarity with the school-day curriculum enabled her to advise after-school staff on the types of homework help that would be most beneficial to students. In addition, these projects offered

---

<sup>9</sup> The distribution of scale scores on the math and ELA tests administered in New York City is neither identical across grade levels nor does it follow a regular progression. Therefore, to facilitate analysis, the study team standardized the scale scores across grades, so that the range of possible test scores extended from 0 to 100 at each grade level and the mid-point of the possible scale scores for each grade level was always 0.50. For more information, please refer to Reisner et al., 2004.



enriched learning opportunities that were different from but complementary to the regular school day, including project-based learning activities. In each of these projects, the site coordinator also required most or all staff to submit lesson plans on a regular basis, thus creating a system for monitoring and improving program quality.

To estimate the relationship between participation in a TASC project and attachment to school, analyses examined whether the gap between after-school participants' and non-participants' school attendance rates increased between 2000-01 and 2001-02. (The attendance data were weighted to adjust for differences in distribution among grade levels between after-school participants and non-participants.) Projects that maintained a strong relationship to the host school and that offered hands-on learning enrichment activities were most successful in encouraging participants' attachment to school, as measured through this analysis of school attendance. These projects generally had seamless transitions between the school-day and after-school, including regular collaboration with school-day teachers and sharing of staff. The projects also offered activities that showed participants how academics related to real-life experiences.

## Discussion

Patterns of associations measured in this study revealed four key features of after-school programming that were consistently related to positive outcomes for middle-grades students:

- ***Skilled and caring staff.*** In the study sites, project staff played a central role in engaging middle-grades students and promoting their social and cognitive development. Projects fostered a sense of community and positive peer and youth-adult relationships in sites where staff members established clear goals and high expectations for mastery while modeling positive behavior. Sites with experienced, qualified after-school staff were assessed as yielding strong academic benefits and encouraging students' attachment to school.
- ***Student choice.*** All eight projects included in this study offered a variety of homework, enrichment, and recreational activities. However, the projects where students displayed the strongest attachment to the after-school program were also those that offered participants the opportunity to help design their own after-school experience by choosing activities, which in turn helped to create a sense of ownership and belonging within the program.
- ***Enrichment activities, including social development and athletic opportunities.*** In the projects where students demonstrated notably positive cognitive development outcomes, they were exposed to enrichment activities that frequently included hands-on learning, which complemented school-day academics. In addition, projects encouraged attachment to the after-school program and positive peer relationships through social development and athletic activities.
- ***Leadership that promotes a strong relationship between the after-school project and the host school.*** The experiences of the eight projects in this study suggest that stability in school and in project leadership were associated with support for student learning and development. In particular, experienced leadership led to a more intentional focus on integrating school-day and after-school programs, for example, by aligning policies, providing some continuity in staffing, and developing after-school activities that supported but differed from the school-day curriculum. In projects with these strong relationships to the host school, students showed evidence of notable achievement gains as well as a stronger attachment to both the after-school program and the school.

### Exhibit 3

#### Relationships Between Student Outcomes and Project Features

Student Outcomes	Project Features	
	Enrichment Opportunities	Staffing and Structure
Attachment to the after-school program	<p>Project offers social development activities, such as conflict resolution</p> <p>Students have choice in activities</p>	<p>Staff establish clear goals and attendance policies</p> <p>Staff encourage student ownership of the project</p> <p>Project has strong ties to the host school</p>
Positive staff-youth relationships		<p>Staff model positive behavior</p> <p>Staff promote student mastery</p>
Positive peer relationships	<p>Project offers social development and athletic activities</p> <p>Activities are structured to encourage youth interactions</p>	<p>Staff set clear expectations for maturity and respect in interactions</p>
Cognitive development	<p>Project offers hands-on learning opportunities that complement school-day instruction</p>	<p>School-day staff help advise or lead project activities</p> <p>Project staff develop lesson plans</p>
Attachment to school	<p>Activities provide real-life connections to school-day learning</p>	<p>Project has some continuity of staffing from school day</p>

### Conclusion

Overall, the findings from this study suggest that after-school projects that serve middle-grades students can contribute to positive student outcomes by promoting program effectiveness through staffing decisions, student choice, high-quality enrichment activities, and leadership that promotes collaborative relationships. These elements of project quality create a supportive environment for student learning and development, and encourage the engagement of middle-grades students in their after-school program, in turn leading to social and cognitive benefits.

## References

- Bransford, J.D., Brown, A.L., & Cocking, R.R. (Eds.). (1999). *How people learn: Brain, mind, experience, and school*. Washington, DC: National Academy Press.
- Cohen, J. (1977). *Statistical power analysis for the behavioral sciences*. San Diego, CA: Academic Press.
- Eccles, J., & Gootman, J.A. (Eds.). (2002). *Community programs to promote youth development*. Washington, DC: National Academy Press.
- Lipsey, M.W., & Wilson, D.B. (2001). *Practical meta-analysis*. Thousand Oaks, CA: Sage.
- McLaughlin, M.W. (2000). *Community counts: How youth organizations matter for youth development*. Washington, DC: Public Education Network.
- Prentice, D.A., & Miller, D.T. (1992). When small effects are impressive. *Psychological Bulletin*, 112, 160-164.
- Orpinas, P., & Frankowski, R. (2001). The aggression scale: a self-report measure of aggressive behavior for young adolescents. *Journal of Early Adolescence*, 21(1), 51-48.
- Reisner, E.R., White, R.N., Russell, C.A., & Birmingham, J. (2004). *Building quality, scale, and effectiveness in after-school programs: Summary report of the TASC evaluation*. Washington, DC: Policy Studies Associates.
- Rosenthal, R., & Vandell, D.L. (1996). Quality of school-aged child care programs: Regulatable features, observed experiences, child perspectives, and parent perspectives. *Child Development*, 67, 2434-2445.

## **Experiential Learning: A Process for Teaching Youth Entrepreneurship**

**Karen Biers, Ph.D.**

Entrepreneurship/Home-Based Business Extension Specialist  
Utah State University  
2949 Old Main Hill  
Logan, UT 84322-2949  
Phone: 435-797-2534  
Fax: 435-797-3845  
[Karenb@ext.usu.edu](mailto:Karenb@ext.usu.edu)

**Christine Jensen, M.S.**

Family and Consumer Sciences Extension Agent  
Utah State University-Emery County  
P.O. Box 847  
Castle Dale, UT 84513  
Phone: 435-381-2381  
Fax: 435-381-5183  
[cjensen@ext.usu.edu](mailto:cjensen@ext.usu.edu)

**Ellen Serfustini, M.S.**

Family and Consumer Sciences Extension Agent  
Utah State University, Carbon County  
120 East Main  
Price, UT 84501  
Phone: 435-636-3236  
FAX: 435-636-3210  
[ellens@ext.usu.edu](mailto:ellens@ext.usu.edu)



## Experiential Learning: A Process for Teaching Youth Entrepreneurship

Karen Biers, Christine Jensen, and Ellen Serfustini  
Utah State University

**Abstract:** Youth of all ages are indicating an interest in starting a business. However, few classes on business start-up and management are available. Young people who are actively engaged in learning business management concepts also develop life skills such as decision making, communicating, and learning to learn. Studies have shown that youth who are in participatory, entrepreneurship classes develop a positive attitude toward starting a business. This article addresses how the experiential learning model provides an opportunity for youth to develop entrepreneurial skills. The entrepreneurial learning model is a learning process of doing, reflecting, and then applying.

*During the past two decades we've completely 're-invented' the American economy. While this dramatic change has allowed us to remain the world's economic leader, young people are simply not being prepared to participate in this rapidly changing economic landscape. Youth entrepreneurship programs are an essential part of preparing boys and girls, young men and women, to take charge of their own economic destiny.*

George Gendron—Founder Inc. Magazine

## Introduction

The Bureau of Labor Statistics projects that the number of self-employed people in the United States will reach 10.2 million by 2006. Forecasting International believes this estimate is low and projects that self-employment will reach 12 million in 2006 (Cetron & Davies, 2005). The growth in self employment provides an opportunity for Extension Agents and volunteers to reach out to new youth audiences and provide them opportunities to have "hands-on" experience recognizing business opportunities and in starting and operating a business based on the opportunity.

Preparing youth for their future in an entrepreneurship focused world is beginning to receive attention in educational programs. Peterman and Kennedy (2003) found that high school students who had prior entrepreneurship experiences were more likely to participate in youth entrepreneurship programs; students who had negative entrepreneurship experiences were more likely to change their perceptions of entrepreneurship when they engaged in a participatory entrepreneurship class.

Entrepreneurship interest appears in young children as they set up lemonade stands, walk dogs for neighbors, or deliver newspapers. Although youth are rarely exposed to entrepreneurship as a career choice, a survey of youth 14 to 19 years of age indicates that seven out of 10 youth would like to start their own business (Walstad & Kourilsky, 1999). Results of a study of 3,076 students indicate that 41.4% of youth 8-12 years of age, 44.4% of youth 13-16 years of age, and 46.7% of youth 17 years of age and older have thought about starting their own business (Consortium for Entrepreneurship Education, 2003). The percentage of youth who want to start their own business continues to increase as they age. Muske and Stanforth (2000) found that 84% of 383 college students, who were non-business majors, want to start their own business.

## Reasons for Starting a Business

Youth are interested in starting a business so they can be their own boss as well as have control of their lives. However, these same youth reported that they lacked business knowledge and the skills necessary to start and operate a business (Walstad & Kourilsky, 1999). The youth also indicated that they lacked ideas for business opportunities as well as information regarding obtaining financial capital. Youth who do not learn how to identify business opportunities and who lack business management skills, may forgo the opportunity to start a business or may start a business venture and fail.

Youth need to be aware of the opportunities and challenges that potential business owners encounter. Small business ownership continues to be a risky endeavor. Two significant factors that keep businesses from failing are entrepreneur education and business ownership by the

entrepreneur's parents (Muske & Stanforth, 2000). A "hands-on" approach to teaching youth entrepreneurship helps young people experience the concepts of business management.

This interest in youth entrepreneurship provides an opportunity for professionals working with youth. Extension business development/management programs and curriculum are available for young people of all ages. Even if youth decide to become an employee rather than a business owner, business management training will help them understand the concepts of business economics. After working with at-risk-students in a traditional school setting, Mariotti (2000) reported that the students responded to and understood math concepts more clearly when these concepts were applied to operating a business. The youth were able to apply the concepts to a real world situation. Mariotti reported that the students also improved reading, writing, and social skills while they learned about entrepreneurship. In addition, the students learned that they could take charge of their future.

Youth who participated in an Extension entrepreneurship program increased their knowledge about business management. Their average pre-course raw test score was 35.7 of a possible 100 and their average post-course test raw score was 70.6 (Maples and Muske, 2001). When adults were asked where they obtained information about operating their home-based business, 23.9 percent of 658 respondents indicated that they used the Cooperative Extension Service. This was the source used most frequently after friends (36.6%) and other home-based business owners (36.8%) (Biers, 1993).

## **Experiential Learning**

The Association for Experiential Education (AEE) defines experiential education ". . . as a process through which a learner constructs knowledge, skill, and value from direct experiences" (Luckmann, 1996). Since its beginnings in the 1900s, 4-H has used the term "learning by doing". This term has evolved into an experiential learning model. Experiential learning is designed to be student-centered rather than teacher-centered. Student-centered learning indicates that the learner is engaged in the process through doing the activity, posing questions, experimenting, solving problems, being creative, and constructing meaning from the experience (Estes, 2004).

## **Application of Experiential Learning to Entrepreneurship Education**

A team of Cooperative Extension personnel received funding to conduct an experience-based youth entrepreneurship pilot program in two rural counties in the Intermountain West. The program targeted youth eight to twelve years of age. The program was implemented in a two week summer day camp lasting three hours each day. To recruit participants, promotional information was distributed to the youth and their parents prior to the end of the school year. Additional promotional strategies included newspaper releases, flyers in local businesses, and local television ads.

The purpose of the program was to provide youth with situations where they could recognize business opportunities and generate ideas to create their own business. The process of starting their own business provided youth with the experience of owning and operating a business in a community/society type setting.

Camp participants created a simulated society and established a currency system. The youth determined how the currency was to be circulated so that every participant had the opportunity

to earn some of the currency. The youth could use the currency to purchase resources from a community store to create a product or to start a service business. If the youth wanted to bring resources from home to make their business product, arrangements were made with parents to accept the society's currency as payment.

Participants met as a group at the end of each day to discuss the day's activities, to reflect on their experiences, and determine how to apply concepts they learned. Thus, when similar businesses opened, participants could discuss the concept of competition. Participants also compiled a resource notebook containing materials from the camp experience. On the last day of the camp, parents and other interested adults were invited to attend and participate in the society's business activities.

### **Program Outcomes**

Along with business concepts, the entrepreneurship camp experience included using skills in math, language, and social interaction. It also provided an opportunity for youth to express their creative abilities.

The program evaluation results from 115 respondents indicated that they would like to open their own business during high school (81.0%) and 83 percent indicated that they would like to start a business as an adult. Results of a camp post-evaluation showed that over three-fourths (88.0%) of the respondents understood the basic business management skills that were covered during the program. In addition to business management skills, the respondents indicated that they learned life skills such as decision making and conflict resolution. Ninety-three percent of the young people involved reported that participation increased their public presentation abilities and 94 percent indicated that they would share the information they gained with other youth (Serfustini & Jensen, 2005).

The results of the pilot program led to implementation in other counties. Additional Extension Agents as well as volunteer leaders received training in experiential based entrepreneurship programming. These Agents and Volunteers implemented the program in a variety of settings including:

- (a) day camps
- (b) after-school programs
- (c) school classrooms and
- (d) home-schooling programs.

### **Discussion**

According to Kourilsky and Walstad (2000) the dominate forces for the creation of new jobs, products and services are entrepreneurship and entrepreneurial thinking. Current entrepreneurship education tends to focus on teaching business management skills and omits the core concept of entrepreneurship which includes opportunity recognition and the ability to locate resources and to create a business from the opportunity. Omission of this vital portion of entrepreneurship does not allow youth to experience the process of identifying opportunities for potential businesses. Educational futurists predicate that all education will become experienced-based by 2025 (Sanborn, Santos, Montgomery, & Caruthers, 2005). To complement the learning experience, experiential learning involves the youth in processing what was learned and how this applies to other areas of his/her life. Experiential learning helps



youth learn subject matter as well as life skills such as decision making, communicating with others, and learning to learn.

A program where the youth establish a simulated society, develop currency for the society, recognize a business opportunity, and start businesses is an excellent way to provide a foundation for youth as they increase their knowledge about entrepreneurship and business management concepts. The program is designed to illustrate the concept of scarcity and how it can lead to a business opportunity. In addition, the youth conduct market research and experience business competition. This beginning program targeting eight to twelve year old youth, can be followed by involving youth in the 4-H Cooperative Curriculum Systems "Be the "e" project. This curriculum is designed for youth of middle and high school age and provides experience-based activities. The Be the "e" curriculum cumulates with the youth developing a written business plan for their own business. Another opportunity for youth to experience operating a business is to participate in the Internet entrepreneurship simulation titled "Hot Shot Business" at <http://www.disney.go.com/hotshot/hsb.html>. This simulation is designed for youth to learn the consequences of business decisions.

## References

Biers, Karen. (1993). Oklahoma home-based businesses: Representative characteristics, economic impact, educational needs. Unpublished master's thesis, Oklahoma State University, Stillwater.

Cetron, Marvin, & Davies, Owen. (2005, May-June). Trends shaping the future: Management trends. *The Futurist*, 39, 47.

Consortium for Entrepreneurship Education, (2003, February). *Updated findings: Youth and entrepreneurship*. Retrieved February, 28, 2005, from [http://www.entre-ed.org\\_entre'tweens.htm](http://www.entre-ed.org_entre'tweens.htm)

Estes, Cheryl A. (2004). Promoting student-centered learning in experiential education. [Electronic version]. *Journal of Experiential Education*, 27(2), 141-160.

Kourilsky, Marilyn L., & Walstad, William B. (2000). *The E generation*. Dubuque, IA: Kendall/Hunt.

Luckmann, Charles. (1996). Defining experiential education. [Electronic version]. *Journal of Experiential Education*, 19(1), 7.

Mariotti, Steve. (2000). *The young entrepreneur's guide to starting and running a business*. New York: Three Rivers Press.

Maples, Jan, & Muske, Glenn. (2001). *Life skill/entrepreneurial education*. Retrieved April 19, 2004, from [http://www.fcs.okstate.edu/microbiz/economic\\_development\\_through\\_microbiz.htm](http://www.fcs.okstate.edu/microbiz/economic_development_through_microbiz.htm)

Muske, Glenn, & Stanforth, Nancy. (2000). The educational needs of small business owners: A look into the future. *Journal of Extension* [On-line], 38(6). Available at <http://www.joe.org/joe/2000december/a4.html>

Peterman, Nicole E., & Kennedy, Jessica. (2003). Enterprise education: Influencing students' perceptions of entrepreneurship [Electronic version]. *Entrepreneurship: Theory & Practice*, 28(2), 129-144.

Sanborn, Robert, Santos, Adolfo, Montgomery, Alexandra L., & Caruthers, James B. (2005, January-February). Four scenarios for the future of education. *The Futurist*, 38(7), 26-30.

Serfustini, Ellen, & Jensen, Christine. (2006). Youth entrepreneurship: A proactive approach to helping rural economies. *Journal of National Association of Family and Consumer Sciences*, 25-26.

Walstad, William B., & Kourilsky, Marilyn L. (1999). *Seeds of success: Entrepreneurship and youth*. Dubuque, IA: Kendall/Hunt.

---

---

## **An Introduction to the SMARTRISK Heroes Program: Positive Social Marketing for Adolescent Injury Prevention**

**Philip R. Groff, Ph.D.**

Director, Research & Evaluation, SMARTRISK

[pgroff@smartrisk.ca](mailto:pgroff@smartrisk.ca)

**Michael P. Shea, Ph.D.**

SMARTRISK Evaluation Coordinator

**Robert Conn, MD, FRCSC**

CEO SMARTRISK



**An Introduction to the SMARTRISK  
Heroes Program:  
Positive Social Marketing  
for Adolescent Injury Prevention**

Philip R. Groff, Michael P. Shea and Robert Conn  
SMARTRISK

**Abstract:** This article provides background on the SMARTRISK Heroes Program, a mobile stage production that introduces young people to the prevalence of unintentional injury for their age group and presents them with a series of strategies that will reduce the likelihood that they will be unintentionally injured or killed. The program logic is consistent with theoretical work from the area of health promotion including the Protection Motivation Theory and the Transtheoretical Model of Stages of Change. The SMARTRISK Heroes Program has been the subject of a number of past evaluations that are briefly described. The program logic model was also included in this article.

## Introduction

### Background

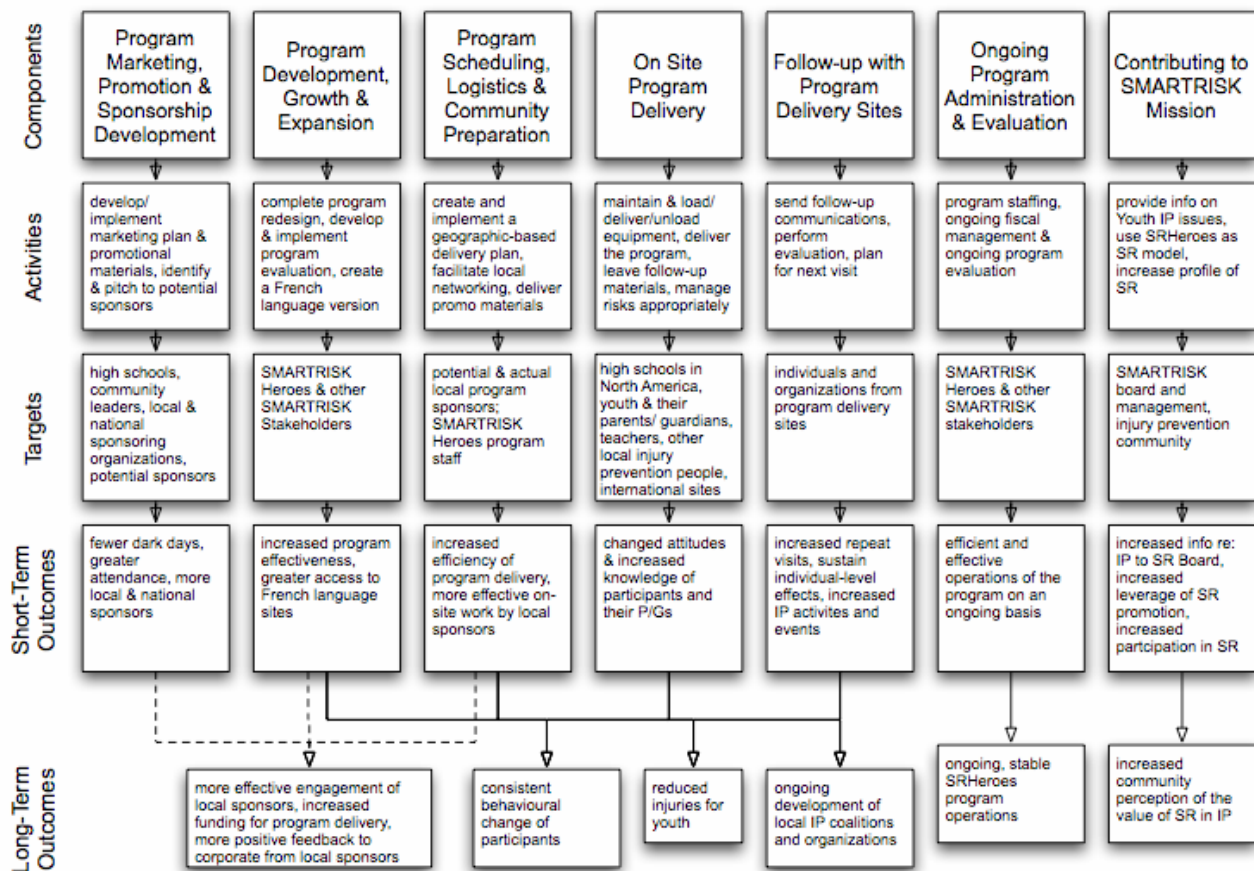
Every year in North America, more adolescents die from injury than all other causes of death combined (Statistics Canada, 2005; CDC, 2005a). The most prevalent unintentional injuries for adolescents are motor vehicle crashes, pedestrian and bicycle injuries, falls, sports-related injuries, drownings, and poisonings (CDC, 2005b). These unintentional injuries take more lives than cancer, meningitis, and all other causes of death combined. The vast majority of these unintentional injuries are both predictable and preventable, and yet adolescents continue to sustain long-term disabilities due to injuries. The following article will present a brief description of the SMARTRISK Heroes Program, a traveling injury prevention initiative that intends to increase the knowledge of high school students in the areas of injury prevention and risk management and to change their attitudes and behaviors in ways that will reduce the likelihood of their unintentional injury or death.

The SMARTRISK Heroes Program is a '... mobile stage production whose primary objective is to introduce young people to the notion of smart risk taking behaviors and empower them to make simple decisions that will significantly reduce their risk of injury' (SMARTRISK, 2000). The program consists of an hour-long presentation that is primarily delivered to groups of high school students in school auditoriums, gymnasiums or other local venues. A national Canadian version of the program was produced by SMARTRISK, a national (Canadian) charitable organization, dedicated to preventing injuries and saving lives. Since the inception of the show, over 10 years ago, more than 1 million youth in Canada, the United States, the United Kingdom, continental Europe and Bermuda have been exposed to the program.

The program features a standard audio-visual presentation that emphasizes SMARTRISK's five injury prevention messages (i.e., "Buckle Up", "Look First", "Wear the Gear", "Get Trained" and "Drive Sober") and introduces SMARTRISK's concept of the "Stupid Line." Following the best principals of social marketing (Witte, Meyer, & Martell, 2001; Andreasen, 1995; Kotler, Roberto, & Lee, 2002), the audio-visual presentation has been specifically designed to appeal to youth and includes a fast moving series of images and loud music reminiscent of a music video. The program also features a verbal presentation that is delivered by a highly credible young adult injury survivor who tells their personal story of surviving injury.

The injury survivor segment emphasizes the importance of taking 'smart risks.' This segment is important because it increases the personal relevance of injury prevention for participants (e.g., injuries can happen to me) and increases the emotional impact of the presentation without resorting to 'scaring the participants straight.' Audience members are also given a question and answer session with the injury survivor in order to further address any questions or concerns that they have about injury prevention related issues. (See Figure 1 for the program logic model for the SMARTRISK Heroes Program).

**Figure 1.**  
SMARTRISK Heroes Program Logic Model



### Theoretical Bases of the SMARTRISK Heroes Program

The program logic of SMARTRISK Heroes is consistent with Protection Motivation Theory (PMT) (Rogers, 1975; Rogers & Prentice-Dunn, 1997) and the related work that integrated PMT with the transtheoretical model of stages of change (Prochaska & DiClemente, 1983; Prochaska, Norcross & DiClemente, 1994; Kidd, Reed, Weaver, Westneat & Rayens, 2003).

According to PMT (Rogers & Prentice-Dunn, 1997), an individual's likelihood of adopting a suggested health behavior is based upon four factors:

- 1) the perceived severity of the threat
- 2) the perceived vulnerability of the threat if no protective behavior is adopted
- 3) the efficacy of the recommended preventive behavior
- 4) The perceived ability to perform the recommended behavior.

The PMT also indicates that behavior is a function of two appraisal processes: threat appraisal and coping appraisal. In the threat appraisal process, the individual evaluates the maladaptive response, which may be a current behavior or one that could be started (e.g., abusing alcohol). The threat appraisal factors that increase the probability of maladaptive responses include intrinsic rewards (e.g., physical and psychological pleasure), and extrinsic rewards (e.g., peer

approval). The threat appraisal factors that decrease the likelihood of the maladaptive response are the severity of the threat (in terms of physical, psychological, social, and economic harm) and the perceived susceptibility to the threat. Fear can also indirectly affect the appraisal of the severity of the danger.

The coping appraisal process evaluates one's ability to cope with and avert the threatened danger. The coping appraisal factors that increase the probability of the adaptive response (adoption of recommended behavior) are the individual's belief that the suggested coping response is effective and that he or she is capable of performing the suggested behavior. Coping appraisal is the combination of these appraisals of response efficacy and self-efficacy, minus any physical and psychological costs of adopting the recommended preventive behavior (Rogers & Prentice-Dunn, 1997). A recent meta-analysis concluded that while all PMT variables were significantly correlated with intention in the predicted direction, self-efficacy was shown to have the strongest impact on intention of all of the PMT variables, and coping-appraisal components of the model had stronger associations with intention than did the threat-appraisal components (Milne, Sheehan & Orbell, 2000).

The SMARTRISK Heroes Program addresses threat appraisal by promoting knowledge that unintentional injury is the most serious threat to the health of youth and that it can have extremely serious consequences including permanent disability or death. The program addresses coping appraisal by offering five courses of action (i.e., "Buckle Up," "Look First," "Wear the Gear," "Get Trained," and "Drive Sober") that youth can implement in order to reduce the likelihood that they are unintentionally injured or killed. The strategies are presented using a positive messaging approach with role models that are attractive to youth and in a manner that focuses on the fact that the benefits to action outweigh any barriers that might exist. The central message of the show, that a hero is anyone who takes action to save a life, even their own, further emphasizes positive coping appraisal, through increasing feelings of self-efficacy.

The transtheoretical model (TTM) was developed by Prochaska and colleagues (Prochaska & DiClemente, 1983; Prochaska et al., 1994) and suggests that individuals progress through six stages when they change their behaviours:

- 1) pre-contemplation stage in which the individual either does not believe he or she has the problem or resists change
- 2) contemplation stage in which the individual acknowledges the problem but is not yet ready to change behaviour
- 3) preparation stage in which the individual makes plans to take action within a definite period of time
- 4) action stage in which the individual begins to actively modify his or her behaviour
- 5) maintenance stage in which the individual reinforces his or her actions and continues to resist temptation
- 6) termination stage in which the individual terminates action when it is clear that the problem behaviour will not recur.

Block, Keller and Punam (1998) integrated PMT with the transtheoretical model of stages of behavioural change. Their empirical test of the integration of these two theories found that increasing perceptions of vulnerability led to greater intentions to comply with recommended behaviours amongst those in pre-contemplation stage. As well, increasing perceptions of severity of threat led to greater intentions to adopt suggested behaviour amongst those in contemplation stage, and increasing perceptions of response efficacy and self-efficacy led to greater behavioural intentions for those in the action stage.

The SMARTRISK Heroes Program attempts to increase perceptions of vulnerability to injury. The focus on the prevalence of unintentional injury for young people, the presentations of vignettes that describe how ordinary youth were permanently disabled by ordinary events and the live presentation by a youthful "injury survivor" serve to motivate those in the pre-contemplation and contemplation phase to want to take action. As previously noted, the presentation of the five injury prevention strategies is designed to elicit strong response-efficacy and self-efficacy for those in the action stage.

It should be noted that some research suggests that there is little evidence supporting the use of TTM to tailor interventions to individuals' action readiness state (Sutton, 1996; Weinstein, Rothman, & Sutton, 1998). This led Abraham, Norman and Connor (2002) to conclude that programs need not be precisely targeted in terms of audience preparedness for change as this would be extremely costly. SMARTRISK has found the cost to be worthwhile, and as injury is a largely underappreciated public health issue, has focused much of the effort in SMARTRISK Heroes toward those in the pre-contemplation and contemplation stages.

### **Evaluation History**

Notwithstanding unsubstantiated claims to the contrary (Pless, 2002a, 2002b), throughout its history, SMARTRISK Heroes has been evaluated on numerous occasions including: Leeds, Grenville & Lanark District Health Unit (1995); SMARTRISK (1996); Smaller World Communications (1999); Green & Camidge (2001); New Brunswick (2003); Shea, Groff & Conn (2003); Groff, Shea, Ghadiali & Conn (2003); and Groff, Shea & Conn (2005a, 2005b).

At the 2003 Canadian Injury Prevention and Safety Promotion Conference, a poster was presented that described the program logic model and the comprehensive evaluation plan for the SMARTRISK Heroes Program (Shea, Groff, Conn, 2003) based on the principles of utilization-focused evaluation (Patton, 1997).

In addition, a second poster was presented at the same conference (Groff, Shea, Ghadiali & Conn, 2003), that described the surveys used to evaluate the effects of the SMARTRISK Heroes Program on high school participants and presented preliminary evaluation findings.

Groff et al. (2003) reported that following participation in SMARTRISK Heroes, Canadian high school students showed statistically significant gains in injury prevention knowledge in several important areas. First, there was a significant increase in the proportion of participants who knew that injury was the leading cause of death for Canadians in their age group. In addition, on the post-surveys a significantly greater proportion of the program participants were able to correctly identify the meaning of the "Buckle Up" and "Drive Sober" injury prevention messages promoted by the SMARTRISK Heroes Program. SMARTRISK defines these concepts in much broader terms than other injury prevention organizations in the script for the program.

When behavioral intentions reported on the post-surveys were compared to behaviors reported on the pre-surveys, they showed significant increases in the frequency of four behaviors that



would decrease the likelihood of their being unintentionally injured or killed. These behaviors were:

- wearing a helmet while riding a bicycle;
- wearing protective gear while playing sports;
- participating in training before attempting a new sport or recreational activity;
- wearing protective equipment while at work.

Information on the more recent participant evaluation processes being used with the SMARTRISK Heroes Program as well as some preliminary results in this area have been presented on the SMARTRISK Navigator website (SMARTRISK 2004, 2005). In addition, some of the results discussed in this article were presented at the Ontario Injury Prevention Conference (Groff, Shea & Conn, 2005b).

Groff et al. (2005b) reported the results from participant evaluations performed in Northern England and Cornwall, Ontario in 2004. Some of these results were also presented in a SMARTRISK Navigator (Internet) article (SMARTRISK, 2005).

The evaluation findings from Northern England were based upon 214 matched surveys in which the same students completed pre-surveys prior to the start of the SMARTRISK Heroes Program, post-surveys immediately following the program and follow-up surveys, three months after they had experienced the program. The findings from Cornwall are based upon 113 matched surveys of the three types.

Table 1 presents the percentage of students from the combined UK samples who responded correctly to each of the seven knowledge questions on each of the three surveys. As can be seen, for five of the seven questions, significantly more students answered them correctly at post-test than had on the pre-test. Equally important, on each of these five items the percentage getting the correct response remained significantly higher at follow-up than at pre-test, though for one of them there was a significant decline from post-test to follow-up-test. The remaining two knowledge items showed a significant increase in correct responses from pre-test to follow-up-test, perhaps implying that informal and formal discussion in the three months following the show had served to reinforce the information presented.

**Table 1.**  
Percentage of Correct Responses on Pre-, Post- and Follow-up Surveys  
for Each Knowledge Item

Item	Pre	*	Post	*	Follow-up
What is the leading cause of death of UK youth aged 11-19?	25.0%	<	59.9%	>	48.3% **
According to SMARTRISK, the "Stupid Line" is...	73.5%	<	82.0%	=	87.0%
According to SMARTRISK, to "Drive Sober" means...	19.0%	<	40.7%	=	35.1%
According to SMARTRISK, to "Wear the Gear" means...	79.6%	=	79.8%	<	88.5% **
According to SMARTRISK, to "Look First" means...	17.6%	<	30.6%	=	26.8%
According to SMARTRISK, to "Buckle Up" means...	25.8%	<	54.6%	=	56.8%
According to SMARTRISK, to "Get Trained" means...	73.0%	=	71.2%	<	85.2% **

\*Significant ( $p \leq 0.05$ ) increases between the proportion correct in from one column to the column to its immediate right are marked with an "<". Significant decreases ( $p \leq 0.05$ ) are marked with an ">". Boldface symbols indicate differences significant at ( $p \leq 0.001$ ). Non-significant differences are marked with an = sign. All differences tested with McNemar's test.

\*\* Significant ( $p \leq 0.05$ ) increases between the proportion correct at Pre-test and that at Follow-up, notwithstanding the relationship between Pre and Post. Boldface symbols indicate differences significant at ( $p \leq 0.001$ ). All differences tested with McNemar's test.

Students from both samples also demonstrated significant changes in their attitudes related to personal vulnerability and the perceived preventability of injuries that were retained at follow-up (See Table 2). Respondents were asked a number of questions designed to capture their attitudes about risk taking, including an assessment of their own personal propensity to take risks. Students indicated their agreement with six statements using a five-point Likert-type scale. For the first question this scale ranged from "Never Take Risks" to "Always Take Risks." For the remaining five attitude questions, the scales ranged from "Strongly Disagree" to "Strongly Agree."

**Table 2.**

Mean Responses (Standard Deviations) on Pre-, Post- and Follow-up Surveys for Each Attitude Item

Item	Pre	*	Post	*	Follow-up
How would you rate yourself in terms of your overall tendency toward risk taking?	2.74 (0.853)	=	2.79 (0.947)	=	2.83 (0.941)
It is my life and if I take risks, I am only endangering myself.	3.15 (1.186)	>	2.82 (1.231)	<	3.02** (1.253)
I can rely upon my parents/ guardians and teachers to understand the risks in a specific situation.	3.44 (1.050)	>	3.20 (1.096)	=	3.14 (1.083)
Life is about taking risks that you face in everyday life and choosing how to manage them.	3.81 (0.837)	=	3.90 (0.892)	=	3.80 (0.938)
I can make choices about many of the risks that might lead to my injury or death.	3.65 (1.153)	<	3.92 (0.972)	>	3.69 (0.998)
If I am injured while riding as a passenger with a driver who is impaired, it is my responsibility because I chose to take the ride.	2.21 (1.166)	<	3.72 (1.056)	>	3.56** (1.055)

\*Significant ( $p \leq 0.05$ ) increases between the level of agreement from one column to the column to its immediate right are marked with an "<". Significant decreases ( $p \leq 0.05$ ) are marked with an ">". Boldface symbols indicate differences significant at ( $p \leq 0.001$ ). Non-significant differences are marked with an "=" sign. All differences tested with Wilcoxon Signed-Rank Test.

\*\* Significant ( $p \leq 0.05$ ) differences between the level of agreement at Pre-test and that at follow-up, notwithstanding the relationship between pre and post. Boldface symbols indicate differences significant at ( $p \leq 0.001$ ). All differences tested with Wilcoxon Signed-Rank Test.

Note that although means and standard deviations are presented for ease of interpretation, the conservative decision to conduct inferential analyses using non-parametric tests was made, and thus conclusion of which differences are significant are actually based on mean ranks, rather than means.

Finally, students from both groups also showed significant changes in their intent to perform or not perform a number of behaviors that would reduce their likelihood of experiencing an unintentional injury or death (e.g., wearing a bicycle helmet, driving a vehicle while distracted, riding with a driver who had been drinking alcohol or using drugs). At follow-up, some of these "good intentions" had not resulted in actual behavior changes. However, on the three-month follow-up, the Cornwall students did show increased wearing of bicycle helmets (when compared to the period three months before the SMARTRISK Heroes show) and the students from Northern England reported that they had significantly increased their actual frequencies of participation in training before attempting a new sports activity and wearing appropriate protective gear while at work (Table 3).

Respondents were provided a number of scenarios and were asked to report on the frequency with which they performed these behaviors in the last three months in the pre-survey. In the post-survey, respondents were asked to report on their intended behavior. Finally, at follow-up, students were again asked to report on the frequency with which they performed these behaviors. Students responded to each statement using a five-point, Likert-type scale ranging from "Never" to "All the Time."

**Table 3.**  
Mean Responses (Standard Deviations) on Pre-, Post- and Follow-up Surveys  
for Each Behavior Item

Item	Pre	*	Post	*	Follow-up
I wore/will wear my seatbelt while riding as a passenger in a motor vehicle	4.51 (0.861)	=	4.43 (1.027)	=	4.35 (1.065)
I wore/will wear a cycle helmet with the strap done up while riding a bicycle	1.41 (1.015)	<	2.61 (1.601)	>	1.52 (1.011)
I tripped or stumbled / will trip or stumble on stairs because I was not paying attention	2.06 (0.923)	<	2.26 (1.190)	=	2.26 (0.993)
I wore / will wear protective gear (e.g., elbow and wrist guards, helmet) while playing sports (e.g., skateboarding, skating, roller-blading, hockey)	1.99 (1.352)	<	3.33 (1.399)	>	2.28 (1.417)
I rode / will ride in a vehicle (e.g., car, motorcycle, snow machine, boat) that was being driven by someone under the influence of alcohol or drugs	1.21 (0.699)	=	1.24 (0.736)	=	1.23 (0.645)
I participated / will participate in training before attempting new sports activities (e.g., skiing, snow boarding, rock climbing, driving a snow machine)	2.97 (1.513)	<	4.00 (1.156)	>	3.48** (1.380)
I always had a plan /will have a plan on how I would get home from a party	3.87 (1.311)	=	4.03 (1.187)	=	3.96 (1.245)
I worked / will work in a job without being trained about work place hazards	1.55 (1.163)	=	1.69 (1.099)	>	1.50 (1.084)
I drove / will drive a vehicle (e.g., bike, car, snow machine) while being distracted by something (e.g., cell phone, talking with a friend)	1.89 (1.230)	=	1.61 (0.895)	=	1.54 (0.979)
When working (e.g., on the job, doing chores), I wore / will wear protective gear (e.g., safety goggles, boots)	2.05 (1.415)	<	3.63 (1.436)	>	2.67** (1.648)

\*Significant ( $p \leq 0.05$ ) increases between the frequency reported from one column to the column to its immediate right are marked with an "<". Significant decreases ( $p \leq 0.05$ ) are marked with an ">". Boldface symbols indicate differences significant at ( $p \leq 0.001$ ). Non-significant differences are marked with an "=" sign. All differences tested with Wilcoxon Signed-Rank Test.

\*\* Significant ( $p \leq 0.05$ ) differences between the frequencies reported at pre-test and that at follow-up, notwithstanding the relationship between pre and post. Boldface symbols indicate differences significant at ( $p \leq 0.001$ ). All differences tested with Wilcoxon Signed-Rank Test.

Note that although means and standard deviations are presented for ease of interpretation, the conservative decision to conduct inferential analyses using non-parametric tests was made, and thus conclusion of which differences are significant are actually based on mean ranks, rather than means.

As noted in Table 3 above, students indicated intent to change their behavior on five of the 10 questions asked at post-test, when compared to their actual reported behavior for the three months prior to the show. For two of these behaviors (getting trained prior to new sports activities, and wearing the gear while on the job), the frequency was significantly different from

pre-test levels at follow-up-test, though not at the level anticipated by the students, immediately following the show. For two other behaviors (wearing a cycle helmet, and wearing other sports gear), their reported frequency had reverted to pre-test levels after three months, despite the intentions reported after the show. Finally, for one of the behaviors, the reported frequency at follow-up, matched their intended frequency immediately after the show, unfortunately, for this behavior (Tripping and falling on stairs due to inattention) the change was in the non-desired direction, perhaps reflecting an increased awareness of tripping hazards rather than an actual intention to fall more frequently which the students subsequently followed through with.

## Conclusion

SMARTRISK Heroes is helping students to understand that it's up to them – not their parents or their friends – to prevent themselves from being injured. By taking adolescents from the pre-contemplation to the action stage, with messages specifically designed to elicit positive threat and coping appraisals, SMARTRISK Heroes is able to create a “teachable moment” where young people learn that they are at risk, and that it is within their power to do something about it.

For further information on SMARTRISK Heroes visit the SMARTRISK Navigator Web Site (<http://www.smartrisk.ca/>) and select SMARTRISK Heroes, under the Youth tab.

## References

Abraham, C., Norman, P., & Conner, M. (2002). Towards a Psychology of Health-Related Behaviour Change. In P. Norman, M. Abraham & M. Connors (Eds.), *Understanding and Changing Health Behavior: from Beliefs to Self-Regulation*. Amsterdam: Harwood Academic Publishers.

Andreasen, A. R. (1995). *Marketing Social Change: Changing Behavior to Promote Health, Social Development, and the Environment*. San Francisco: Jossey-Bass (A Wiley Imprint)

Block, G. L., & Keller, A., Punam. (1998). Beyond Protection Motivation: An Integrative Theory of Health Appeals. *Journal Of Applied Social Psychology, 28*(17), (1584-1608).

Centers for Disease Control and Prevention (CDC). (2005a). *Ten Leading Causes of Death by Age Group, 2002*. URL: <ftp://ftp.cdc.gov/pub/ncipc/10LC-2002/PDF/10lc-2002.pdf>

Centers for Disease Control and Prevention (CDC). (2005b). *Ten Leading Causes of Injury Death: Highlighting Unintentional Injury*. URL: <ftp://ftp.cdc.gov/pub/ncipc/10LC-2001/PDF/10lc-unintentional.pdf>

Green, J. & Camidge, D. (2001). *Evaluation of the SMARTRISK Heroes Show*. Leeds Metropolitan University, Leeds, England.

Groff, P.; Shea, M.; Ghadiali, J. & Conn, R. (2003). *Developing and Implementing Participant Evaluation Surveys for SMARTRISK Heroes: Lessons Learned and Preliminary Findings*. Poster presented at the Canadian Injury Prevention and Safety Promotion Conference, Ottawa, Ontario, October 2003.

- Groff, P.; Shea, M. & Conn, R. (2005a). *SMARTRISK Heroes Program: Summary of Past Evaluations*. SMARTRISK Foundation, Toronto, Ontario, Canada (posted on the Internet at [www.smartrisk.ca](http://www.smartrisk.ca)).
- Groff, P.; Shea, M. & Conn, R. (2005b). *Evaluating the Longer-Term Effects of the SMARTRISK Heroes program Using Follow-up Surveys with Samples of Student Populations*. Paper presented at the Ontario Injury Prevention Conference, London, Ontario, March 22<sup>nd</sup>, 2005.
- Kidd, P.; Reed, D.; Weaver, L.; Westneat, S. & Rayens, M. K. (2003). The Transtheoretical Model of Change in Adolescent: Implications for Injury Prevention. *Journal of Safety Research*, *34*, 281-288.
- Kotler, P., Roberto, N., and Lee, N. (2002). *Social Marketing: Improving the Quality of Life*, 2<sup>nd</sup> ed. Thousand Oaks, CA: Sage.
- Leeds, Grenville and Lanark District Health Unit (1995). *Evaluation of Injury Prevention Strategies: Heroes*. LGLDHU Department of Professional Resources & Department of Community Health Services, Brockville, ON.
- Milne, S., Sheeran, P., & Orbell, S. (2000). Prediction and Intervention in Health-Related Behavior: A Meta-Analytic Review of Protection Motivation Theory. *Journal Of Applied Social Psychology*, *31*(1), (106-143).
- New Brunswick Safety Council & Workers' Health and Safety Compensation Commission (2003). *New Brunswick Heroes Tour: Evaluation Results*. Fredericton, NB.
- Patton, M. Q. (1997). *Utilization-Focused Evaluation: The New Century Text (Third Edition)*. Sage Publications, Thousand Oaks: CA.
- Pless, B. (2002a). Taking Risks with Injury Prevention. *Canadian Medical Association Journal*, *167*, 7(767-768).
- Pless, B. (2002b). From the editor's desk. *Injury Prevention*, *8*, (173-174).
- Prochaska, J. O., & DiClemente, C. C. (1983). Stages and Processes of Self-Change of Smoking: Toward an Integrative Model of Change. *Journal of Consulting and Clinical Psychology*, *51*, 390-395.
- Prochaska, J. O., Norcross, J. C., & DiClemente, C. C. (1994). *Changing for Good*. New York: William Morrow.
- Rogers, R. W. (1975). A Protection Motivation Theory of Fear Appeals and Attitude Change. *The Journal of Psychology*, *91*, 93-114.
- Rogers, W. R., & Prentice-Dunn, S. (1997). Protection Motivation Theory. In S. D. Gochman (Ed.), *Handbook of Health Behavior Research I: Personal and Social Determinants* (pp. (113-132)). New York: Plenum Press.

Shea M. P.; Groff, P. & Conn, R. (2003). *Lessons Learned During the Design and Implementation of an Evaluation Framework for the SMARTRISK Heroes Program*. Poster presented at the Canadian Injury Prevention and Safety Promotion Conference, Ottawa, Ontario, October 2003.

Smaller World Communications (1999). *An Evaluation of Heroes*. Richmond Hill, ON.

SMARTRISK (1996). *An Evaluation of the HEROES Program*. Toronto, Canada: SMARTRISK Foundation.

SMARTRISK (2000). *SMARTRISK Heroes Program Description*. Toronto, Canada: SMARTRISK Foundation.

SMARTRISK (2004). *Preventing injury in their hands, students learn*. SMARTRISK Navigator article posted 2004/09/13 at [www.smartrisk.ca](http://www.smartrisk.ca).

SMARTRISK (2005). *SMARTRISK Heroes makes lasting impression*. SMARTRISK Navigator article posted 2005/04/07 at [www.smartrisk.ca](http://www.smartrisk.ca).

SMARTRISK UK (2005). *SMARTRISK UK Heroes Program Evaluation Plan*. Leeds, England: SMARTRISK UK.

Statistics Canada (2005). Canadian Vital Statistics, Death Database. Causes of death. Chapter XX: External causes of morbidity and mortality (V01-Y89), by age group and sex. Ottawa: Statistics Canada; 2002. Cat. No: 84-208-XIE.

Sutton, S. R. (1996). Can 'Stages of Change' Provide Guidance in the Treatment of Addictions? A Critical Examination of Prochaska and DiClemente's model. In G. Edwards & C. Dare (Eds.), *Psychotherapy, Psychological Treatments and the Addictions*. Cambridge: Cambridge University Press.

Weinstein, N. D., Rothman, A. J., & Sutton, S. R. (1998). Stage Theories of Health Behavior: Conceptual and Methodological Issues. *Health Psychology, 17*, 290-299.

Witte, K., Meyer, G., and Martell, D. (2001). *Effective Health Risk Messages: A Step-by-Step Guide*. Thousand Oaks, CA: Sage.



---

## Rethinking Concept Mapping for Youth Participatory Evaluation in the Context of Youth Development Programs

**Jennifer Southwick Brown**  
Department of Human Development  
Cornell University  
[JSB75@cornell.edu](mailto:JSB75@cornell.edu)



---

## Rethinking Concept Mapping for Youth Participatory Evaluation in the Context of Youth Development Programs

Jennifer Southwick Brown  
Cornell University

**Abstract:** As a mixed-methods participatory approach, concept mapping (Trochim, 1989) provides unique opportunities for engaging youth in evaluating the contexts and environments in which they develop. Youth development programs, by definition, seek to fully engage youth as partners and provide them with opportunities to effect positive change. This includes encouraging youth to be involved in the process of designing, implementing, and evaluating the programs and activities in which they participate. Concept mapping has been used successfully with adult populations; however its utility with adolescents in the context of youth development programming has yet to be explored. This paper explores both the obstacles and successes associated with utilizing this participatory approach with youth.

### Evaluating Youth Development Programs

In order to determine whether a program has an impact, we must have clear outcomes or indicators of successful development. Traditionally, positive outcomes have been measured by the absence of behavioral problems. More recently, efforts are being made to measure the presence of healthy development (National Research Council & Institute of Medicine, 2002).

Any evaluation of youth development programs should include the input of the youth themselves in order to follow the fundamental principle of youth participation and empowerment (Benson, Scales, Hamilton, & Sesma, 2006). A youth participatory evaluation methodology is needed that allows youth to have a voice in the evaluation of programs in which they participate.

#### *The Importance of a Collaborative Approach*

Community-based participatory research (CBPR) methods confirm that practitioners and community members are more likely to embrace the results of research if they have been



actively engaged in the research process (Green & Mercer, 2001; Krieger, et al., 2002; Wallerstein, 1999). Typically, policy makers control the resources and thus are the primary decision makers. Researchers are responsible for determining the areas worthy of study. CBPR attempts to adjust the scales so that all stakeholders equally share power, funds, and responsibility (Lantz, Viruell-Fuentes, Isreal, Softley, & Guzman, 2001). Each participant adds important expertise to any research endeavor, and in particular can increase understanding and enhance the quality of research (Eisinger & Senturia, 2001; Higgins & Metzler, 2001; Macaulay et al., 1999).

## Concept Mapping as a Youth Participatory Evaluation Tool

At its core, concept mapping is a participatory approach that enables large groups of people from a variety of perspectives to reach consensus while minimizing the differentiation of power between the groups. Concept mapping ensures that all participants have an equal voice and that one person or group does not dominate the process or outcomes. Although concept mapping is not traditionally used with youth or in the context of evaluating youth programs, it has the potential to be an ideal tool for use in this context. If properly designed, concept mapping enables and encourages youth voice and youth empowerment.

### *Overview of the Concept Mapping Methodology*

Concept mapping (Trochim, 1989) is a descriptive approach that utilizes qualitative data but also includes a quantitative component using multidimensional scaling and hierarchical cluster analysis. Concept mapping involves the following stages:

1. **Preparation** includes generating the focus prompt (an open-ended sentence that participants are asked to complete), determining the participants and how they will be contacted, and setting the project schedule.
2. **Generation** of brainstormed statements in response to a focus prompt.
3. **Structuring** of issues which includes sorting and rating statements on the dimension of importance and (for the purposes of the study in the following example) consistency with YD principles. Participants are also asked to answer several questions that will enable subgroup analysis.
4. **Analysis** and pre-interpretation of participant input involves a sequence of multivariate statistical methods including multidimensional scaling and hierarchical cluster analysis.
5. **Interpretation** of results occurs in a facilitated session that follows a prescribed sequence of steps.

### *Concept Mapping in a Youth Development Context: An Example*

The following is an example of an exploratory study of a collaborative approach to understanding the characteristics of successful youth development programs. This study marks an initial step toward developing measurable indicators of positive development. Participants included policy makers, practitioners, researchers, and youth who were involved at some level (employed, studied, or participated) in programs that aim to foster positive youth development.

A total of 163 people participated in at least some aspect of the study. The group was comprised of 22 policy makers (13.5%), 72 practitioners (44.2%), 31 researchers (19.0%), 34

youth (20.9%), and 4 people (2.4%) who did not associate with any of the 4 groups already mentioned.

All of the participants were asked to brainstorm in response to the following focus prompt: "A specific characteristic or component of a successful adolescent/youth program is..." Note that the focus prompt asks that participants consider characteristics of successful adolescent/youth programs in general. It does not specifically ask about *youth development* programs. This was done to ensure that the youth participants could understand and participate in the brainstorming and sorting phase of the study. The youth development concept emerges in the rating activity and is discussed in greater detail below. The goal was to differentiate between successful youth programs in general and youth development programs in particular.

The youth were not expected to differentiate between youth programs in general and youth development programs in particular. All of the youth were current participants in a youth development program. Their involvement in other youth programs (which may or may not have had a focus on promoting positive youth development) was not known. For the purposes of this study, it was not necessary for the youth to differentiate between youth development programs and other youth programs. The goal was to ascertain the components of youth programs that the youth themselves deemed important. The adults in the study were subsequently asked to distinguish those components of successful youth programs that are specific to youth development programs. In order to ensure youth participation in the study to the fullest extent possible, the focus prompt was worded in such a way that the youth could understand the task and provide critical feedback.

The policy makers, practitioners, and researchers were asked to individually generate between 5 and 10 statements in response to the prompt, fill in a brainstorming form, and return it via email. The youth completed the brainstorming activity in a format that differed from that used for adults. Youth brainstorming was conducted during an in-person, facilitated brainstorming session held at their program location. The in-person facilitation technique was used with the youth in order to further engage them in the process. Youth who may not usually participate in activities were encouraged to generate ideas and they had an opportunity to discuss as a group the aspects of their own program that are successful.

At least two researchers were present for each brainstorming session. The focus prompt was projected on a screen and the youth were asked to take a few minutes to individually write down several responses to the prompt. The primary facilitator then went around the room and asked each participant to read aloud one of their statements. The second researcher entered each of the statements verbatim into a word document that was projected on a screen. The facilitator went around the room several times asking the participants to read one of their statements. The facilitator then read through the list of generated statements and asked if there was anything else that anyone wanted to add.

In total, 1,075 statements were generated by all of the participants. In line with the concept mapping methodology, these statements were subsequently edited and reduced to a final set of 100 statements that represents the details present in the original brainstormed set. Keywords in Context (KWIC; a software program developed by William Trochim) was used in conjunction with a novel synthesis technique to reduce the statement set (Brown, 2005).

A subset of the adult participants subsequently rated each of the 100 statements for relative importance (on a 1 to 5 Likert-type scale) and a dichotomous variable (yes/no) that asked

whether each statement was in line with their conception of youth development. A subset of adult participants also individually sorted the statements based upon conceptual similarity.

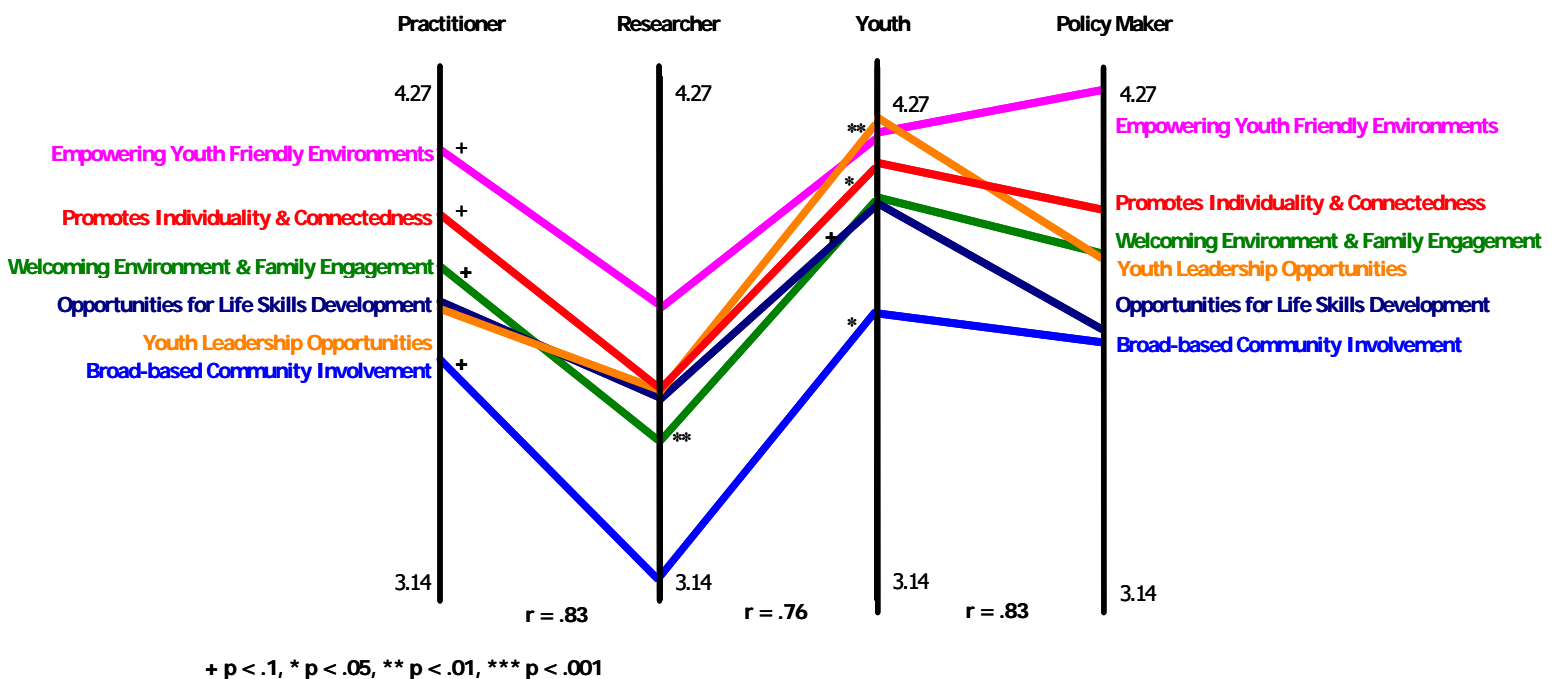
All of the youth participants were asked to complete the sorting activity and the rating on relative importance. A team of researchers returned to the youth program sites to facilitate the sorting and rating activities. The youth were not asked to complete the youth development rating because they were not expected to differentiate between successful youth programs in general and youth development programs specifically.

After the initial data analysis was completed, representatives from each participant group were invited to attend an interpretation session. The purpose of this session was to view and discuss the initial construct map, to assign cluster names, and to explore the consensus analysis. Youth were actively engaged in this process. Participants in the interpretation session decided on the following cluster names: Ongoing program monitoring and assessment, Broad-based community involvement, Program structure, Innovative strength-based principles, Welcoming environment and family engagement, Expectations of youth workers, Empowering youth friendly environment, Youth leadership opportunities, Promotes individuality and connectedness, and Opportunities for life skills development. For a more detailed discussion of the results see the ACT for Youth website (Brown, 2006).

### Outcomes

Across the statement set, youth and researchers tended to rate statements differently than both practitioners and policy makers (figure 1).

**Figure 1**  
*Clusters of Characteristics of Successful Youth Programs: Group Differences in Importance Ratings Ladder Graph*



Youth consistently rated statements as higher in importance than both practitioners and researchers. For example, youth viewed youth leadership opportunities as significantly more important than both researchers and practitioners. Youth also rated statements pertaining to

community involvement and connectedness as higher in importance than both researchers and practitioners. Taken together, these results indicate the need to include a youth voice in any research endeavor that has a direct impact on programming for youth.

## Obstacles

There were a few notable obstacles we encountered while using the concept mapping methodology with a youth population. The most obvious barrier to participation was the level of language used in the statement set. There were several, complex and long statements that were most likely generated by a member of one of the adult subgroups. During the sorting and rating activity, many youth asked for clarification of terminology and appeared to struggle with the conceptual meaning of some of the statements. The data suggest that their degree of conceptual understanding of the statement set may have had an impact on how they completed their sorts. The youth sorted the statement set significantly differently than the practitioners, researchers, and policy makers. One possible solution to this problem would be to have the youth engage in the statement synthesis process in order to monitor the level of language used in the final statement set. This suggests that when working with youth populations the language should be written at an appropriate level for all of the participants.

Another notable barrier to youth participation in concept mapping is the sheer number of statements in the set. Traditionally, concept mapping projects use statement sets that do not exceed 100 statements. This may be too many statements when working with a youth population. Many youth had trouble focusing for the length of time required to sort and rate 100 statements. Some of the youth may also have struggled with the statements due to the abstract thinking skills required to interpret meaning. Fewer and simpler statements would make it easier for the youth to concentrate and would remove some of the cognitive barriers. This study employed a normative population; these issues may become even more pronounced when working with populations of at-risk youth.

## Successes

One of the major benefits of the concept mapping approach is that it allows youth to engage in a research endeavor with adults. The youth were not simply tokens, but rather, their opinions were fully integrated into the research process and weighted equally with the opinions of the other participant groups. One of the primary tenets of youth development programs is youth engagement and empowerment. Concept mapping supports this philosophy by engaging youth in the process of evaluating the programs in which they participate.

Concept mapping also has the potential to be used to explore and address a variety of other research and/or practical questions that arise within the context of a youth development program. For example, concept mapping can be used as part of the planning phase for a youth led action research project. Concept mapping can be used to ascertain the opinions of multiple participants, organize the information into interpretable data, and provide guidance for future action. In particular, the rigor of the methodology provides the data often needed to support decisions made at the program level.

Another obvious, yet important benefit of the use of concept mapping with youth populations is that it is easily made into a developmentally appropriate activity for multiple age groups. However, the presence of trained researchers during the activities was important.

## Future Considerations

Future research should explore how concept mapping can be adapted for use with other youth populations. The youth involved in this study were from a normative sample. Populations of particular interest include youth living in residential facilities, incarcerated youth, disabled youth, and younger/pre-literate children.

## References

- Benson, P.L., Scales, P.C., Hamilton, S.F., & Sesma, A., Jr. (2006). Positive youth development: Theory, research and applications. In W. Damon & R.M. Lerner (Series Ed.) & W. Damon (Vol. Ed.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (6<sup>th</sup> ed.). New York: Wiley.
- Brown, J.S. (2006, February 10). *A collaborative approach to understanding the components of successful youth development programs*. Retrieved May 28, 2006., from <http://www.actforyouth.net/documents/Dissemination%20Report%2081.2.2005.pdf>
- Brown, J.S. (2005). So many ideas, so little time: Statement synthesis in a youth development context. Paper presented at the annual meeting of the American Evaluation Association, Toronto, Canada.
- Eisinger, A., & Senturia, K. (2001). Doing community-driven research: A description of Seattle partners for healthy communities. *Journal of Urban Health, 78*(3), 519-534.
- Green, L. W., & Mercer, S. L. (2001). Can public health researchers and agencies reconcile the push from funding bodies and the pull from communities? *American Journal of Public Health, 91*(12), 1926-1929.
- Higgins, D. L., & Metzler, M. (2001). Implementing community-based participatory research centers in diverse urban settings. *Journal of Urban Health, 78*(3), 488-494.
- Krieger, J., Allen, C., Cheadle, A., Ciske, S., Schier, J. K., Senturia, K., et al. (2002). Using community-based participatory research to address social determinants of health: Lessons learned from Seattle partners for healthy communities. *Health Education & Behavior, 29*(3), 361-382.
- Lantz, P. M., Viruell-Fuentes, E., Isreal, B. A., Softley, D., & Guzman, R. (2001). Can communities and academia work together on public health research? Evaluation results from a community-based participatory research in Detroit. *Journal of Urban Health-Bulletin of the New York Academy of Medicine, 78*(3), 495-507.
- Macaulay, A. C., Commanda, L. E., Freeman, W. L., Gibson, N., McCabe, M. L., Robbins, C. M., et al. (1999). Participatory research maximizes community and lay involvement. *British Medical Journal, 319*(7212), 774-778.

National Research Council & Institute of Medicine (Eds.). (2002). *Community programs to promote youth development*. Washington, DC: National Academy Press.

Trochim, W. M. K. (1989). An introduction to concept mapping for planning and evaluation. *Evaluation and Program Planning, 12*(1), 1-16.

Wallerstein, N. (1999). Power between evaluator and community: Research relationships within New Mexico's healthier communities. *Social Science and Medicine, 49*(1), 39-53.

---

## **Statistical Testing of a Measure of Youth's Perceived Improvement in Life Skills**

**Dr. Lisa A. Guion, Ed.D.**

Associate Professor  
Department of Family, Youth and Community Sciences  
University of Florida  
Gainesville, FL  
[laguion@ifas.ufl.edu](mailto:laguion@ifas.ufl.edu)

**Blanca E. Rivera**

Department of Education  
College of Education  
University of Florida



## Statistical Testing of a Measure of Youth's Perceived Improvement in Life Skills

Dr. Lisa A. Guion and Blanca E. Rivera  
University of Florida

**Abstract:** This article presents findings from the statistical test of an instrument designed to measure youth's perceptions of the life skills that were improved as a result of their participation in 4-H Clubs. The questionnaire was administered to 126 4-H club members in Florida. The 19-item self-rating Life Skills Improvement Scale was examined for face and content validity. The results were also submitted for exploratory factor analysis and internal consistency testing. The factor analysis yielded a four-factor solution to the 19-item scale, which accounted for 62.6% of the variance in the scale. The Cronbach's alpha reliability coefficient for the 19 items was 0.88. The article also discusses implications and future use of the instrument, as well as recommendations for further study.

### Introduction

An important objective of 4-H Youth Development programs is to help young people develop life skills. Increasingly, 4-H Extension educators are being required to evaluate their programs to determine whether targeted life skills were developed, improved and/or enhanced. Consequently, it is critical that 4-H educators have evaluation tools/instruments that are both, valid and reliable.

"Validity refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration." (Babbie, 2001, p.143) 4-H educators need instruments that are truly measuring what is intended to be measured. On the other hand, "reliability is defined as "an estimate of the stability, dependability, or predictability of a measure." (Thomas, 2005, p.370) According to Santos, "when you have a variable generated from a set of questions that return a stable response, then your variable is said to be reliable." (Santos, 1999, p.2) Reliability focuses on whether the instrument would yield consistent results if/when applied repeatedly with the same audience. Reliability and validity of an instrument increases the faith in and credibility of the results.



Severs, Dormody & Clason (1995) stress the importance of 4-H, FFA and other youth serving organizations having valid, reliable measurement instruments. Their work in testing leadership instruments represented a significant contribution to the field in that it produced a valid and reliable measure of youth leadership skills. However, 4-H focuses on the development and enhancement of many other types of life skills as well. In a search of the literature, the researcher could not identify an instrument that had been scientifically tested that measured a broader aspect of 4-H life skill development.

Therefore, the purpose of this study was to test the validity and reliability of a scale designed to measure youth's perceptions of their improvement in key life skill areas resulting from their involvement in 4-H Clubs.

## Methods

### *Instrument*

The Life Skills Improvement Instrument includes 19 indicators of life skills and abilities. Each indicator used a five point Likert Scale with 1 being (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree) and 5 (strongly agree). The items included in the instrument were determined by conducting two strategic steps. First, the researcher surveyed the literature that conceptualized 4-H life skills. For example, life skills from the Targeting Life Skills model (Hendricks, 1998) were identified. Ultimately, life skills from the Texas 4-H evaluation instrument, which is based on the Hendrix model, were adapted for use in the Life Skills Improvement Scale. The Texas model was adapted because "the youth development skills section is a set of statements that are relevant to all project experiences and to youth of all ages and backgrounds." (Howard, Boleman, Alvey, Burkhum, Chilek, Stone, et.al., 2001, p.2).

Second, nine Extension 4-H Agents from different districts in the state of Florida were asked to select the life skills that their 4-H program targets. They were also encouraged to add to or refine the list of life skills. Those items that had the greatest level of consensus were chosen for inclusion in the Life Skills Improvement Scale. Attachment 1 provides a copy of the Life Skills Improvement Scale.

### *Participants*

Participants of the study were 126 youth members of 4-H Clubs in Florida, of which 36% (n=45) were male and 64% (n=79) female. The average age was 13.8 years, ranging from 7 to 18 years old. Participants have been members of 4-H an average of 4.7 years ranging from 2 months to 12 years. More than half (66%, n=83) of the youth in this study described themselves as Caucasian/White, 22% as African-American (n=28), 7% as Hispanic/Latino (n=9), and 5% described themselves as Other (n=6).

Participants and their parents signed informed consent forms and no compensation was provided for participation in the study. The instrument was administered during a regular 4-H club meeting.

## Instrument Testing

**Validity.** Face validity and content validity were used to determine the measure's validity. Face validity refers to an agreed upon meaning of concepts (Babbie, 2001). The measure is determined to be valid "on its face " (Babbie, 2001). Content validity refers to how much a measure covers the meanings included in the construct to be researched/evaluated (Babbie,

2000). Face and content validity were assessed using a panel of experts. The six-member expert judge panel included three 4-H Extension Specialists, two faculty members in Schools of Education, and one Extension Evaluation Specialist. A structured process for the evaluation of face and content validity was given to each expert. Each expert independently rated the relevance of each item to the identified objective using a 4-point rating scale: 1= not relevant, 2 = somewhat relevant, 3 = quite relevant, 4 = extremely relevant. Finally, content validity index was calculated for the measure. The overall content validity index for the instrument was 0.95, which is the proportion of items rated as content valid (a rating of 3 or 4) by the six experts.

**Reliability.** Cronbach's alpha, a numerical coefficient of reliability, was used to test the reliability of the Life Skills Improvement Scale. Cronbach's alpha was chosen because it "can be computed from data on a single administration of a test and does not require parallel forms, a test-re-test scenario, or multiple judges for which an intra-class correlation coefficient can be used." (Zumbo & Rupp, 2004, p.79).

Alpha coefficients range from 0 to 1. The higher the score, the more reliable the generated scale is. A computed alpha coefficient of 1 denotes perfect internal reliability, whereas 0 indicates no internal reliability (Bryman, 2001). An alpha of 0.80 is typically employed as a rule of thumb as an acceptable level of internal reliability (Bryman, 2001). Therefore, 0.80 was set as the threshold for this study.

**Factor Analysis.** Exploratory factor analyses were conducted for the Life Skills Improvement Scale using Principal Component extraction and Varimax rotation with an eigenvalue > 1 to explore the factor structure of the instrument. "The purpose of the principal component analysis is to explain as much of the total variation in the data as possible with as few factors as possible" (Kleinbaum, Kupper, & Muller, 1988, p.615). The Kaiser-Meyer-Olkin (KMO) measures of sampling adequacy and Bartlett's test of sphericity were used to determine the suitability of the matrix for factor analytic procedures. The KMO serves as an index of the strength of relations among variables. "This index yields an assessment of whether the variables belong together psychometrically and thus, whether the correlation matrix is appropriate for factor analysis" (Dziuban & Shirkey, 1974, p. 359). KMO correlation magnitudes of .80 and .90 indicate highly acceptable relations in the matrix, whereas results of .60 and below suggest relations of inferior or unacceptable quality not justifying further data analysis. The Bartlett's test of sphericity is a chi-square test of the significance of a correlation matrix. According to Pedhazur and Schmelkin (1991), the null hypothesis is that the matrix is an identity matrix, that is, all the correlations in the matrix are equal to zero. The Bartlett's test of sphericity determines whether the hypothesis that all the correlations in the matrix are not statistically different from zero can be rejected (Pedhazur & Schmelkin, 1991). When this hypothesis cannot be rejected, the matrix should not be factor analyzed (Tinsley & Tinsley, 1987).

## Findings/Results

### **Factor Analysis**

Results from the KMO (.81) and Bartlett's test ( $\chi^2=1038.80$ ,  $df= 171$ ,  $p<.001$ ) indicated highly acceptable and statistically significant relationships among variables in the matrix. The factor analysis yielded a four-factor solution to the 19-item scale, which accounted for 62.6% of the variance in the scale. Eigenvalues were 6.44 for leadership, 2.20 for basic life skills, 1.96 for 4-H Animal Projects, and 1.30 for workforce preparation. All individual items had loadings above .50 except item 17, "leading a healthy lifestyle" which had a loading of .43 in factor 1,

.46 in factor 2, and .43 in factor 3. One item from the basic life skills factor (#11 "write more clearly") also loaded in the leadership factor. And one item from the workforce preparedness factor (#10 speak publicly) loaded in the leadership factor. These two items had loading below .50. The items and their loadings are presented in Table 1.

**Table 1**  
Summary of factor loadings for orthogonal four-factor solution for the Life Skills Improvement Scale

Activity	Factor Loadings			
	Leadership	Basic Life Skills	4-H Animal Projects	Workforce Preparedness
1. keep accurate records	.65			
2. plan/organize	.80			
3. set goals	.75			
4. solve problems	.70			
5. make decisions	.73			
6. serve my community or volunteer	.56			
7. lead a group				.67
8. get ready for a job				.56
9. plan my career				.65
10. speak publicly	.45			.52
11. write more clearly	.40	.55		
12. solve conflicts	.56			
13. sew		.82		
14. cook		.82		
15. groom an animal/pet			.86	
16. feed and care for animal/pet			.91	
17. lead a healthier lifestyle	.43	.46	.43	
18. use a computer or other technology		.63		
19. learn photography or other media		.69		

### **Reliability Analyses**

The Cronbach alpha reliability coefficient for the 19-item Life Skills Improvement Scale was 0.88. There are four subscales. The Leadership Subscale is comprised of questions 1, 2, 3, 4, 5, 6, and 12. The Workforce Preparation Subscale consists of questions 7, 8, 9, and 10. The Basic Life Skills Subscale is comprised of questions 11, 13, 14, 17, 18, and 19. The fourth and final subscale is 4-H Animal Project Skills, which consists of questions 15 and 16.

Table 2 shows the alpha for each sub-scale. Three of the four sub-scales were found to be highly reliable based on the predetermined criteria of alpha greater than or equal to 0.80. These include: 1) Leadership Skills (.86), 2) Basic Life Skills (.81), and 3) 4-H Animal Project Skills (.90). Therefore, those three subscales can be used independently to measure leadership skills, basic life skills or 4-H animal project skills respectively. To a lesser extent, the Workforce Preparation Subscale was moderately reliable (.70).

**Table 2**

Scale structure and Cronbach alpha reliability coefficient for the sub-scales of the Life Skills Improvement Scale

Factor	Items from Table 1	Alpha
Leadership skills	1, 2, 3, 4, 5, 6, 12	.86
Workforce preparation	7, 8, 9, 10	.70
Basic life skills	11, 13, 14, 17, 18, 19	.81
4-H animal project skills	15, 16	.90

### **Implications and Recommendations**

The results of this analysis indicate that the Life Skills Improvement Scale is a valid and reliable measure of youth's perceptions of their improvement in key life skill areas resulting from their involvement in 4-H. This scale can be used, with confidence, in both formative and summative evaluation. Formatively, Extension 4-H educators can use this tool to earmark life skills that are not perceived by the youth in their program to be improved. Armed with this information the educators can make future program adjustments to address the issue. In relation to summative evaluation, the instrument provides one way that Extension 4-H educators can demonstrate the effectiveness of their 4-H Club Program in improving key life skills among 4-Hers.

However, in the interest of scholarship and refining knowledge in the 4-H field, the instrument should continue to be tested. Further psychometric testing could focus on the criterion validity and/or construct validity of the instrument. The instrument could be tested with youth who have other types of 4-H involvement such as after-school, camping, school enrichment, etc. The instrument could be tested with 4-H Programs in other states. Also, while the sample size was sufficient for statistical analysis, further studies could be conducted with larger sample sizes that have even greater age, gender and/or ethnic diversity. Comparatively, the instrument can be used with 4-H youth and youth in other youth-serving organizations to determine differences in perceptions of life skill improvement resulting from participation in their respective youth organization.

### **Conclusion**

An essential part of 4-H Youth Development program planning is the coordination of life skills to be taught with the indicators to be used in the evaluation process (Loeser, Bailey, Benson, & Deen, 2004). Once indicators of program outcomes are selected, then extension educators must identify or develop evaluation tools (surveys, scales, tests, etc.) to measure those indicators. These tools must be tested for validity and reliability, at a minimum, if we are to place faith in program evaluation results. Also, continued research to refine and test the evaluation tools must also occur if we are to truly advance scholarship in our 4-H Youth Development program evaluation work.

## EVALUATION: Florida 4-H Club Member Survey

We want to know your opinion about your 4-H club experience this past year. Your answers to following questions are very important in helping us learn not only what is working well in 4-H, but also what can be approved upon. **Please answer all questions based on this past year only (200X Club year). Circle the number that corresponds with your level of agreement with each. Circle only one response for each question.**

As a result my 4-H club involvement this past year, I **improved** my ability to:

		<b>Strongly Disagree</b>	<b>Disagree</b>	<b><i>Neutral</i></b>	<b>Agree</b>	<b><i>Strongly Agree</i></b>
1	...keep accurate records	1	2	3	4	5
2	...plan/organize	1	2	3	4	5
3	...set goals	1	2	3	4	5
4	...solve problems	1	2	3	4	5
5	...make decisions	1	2	3	4	5
6	...serve my community or volunteer	1	2	3	4	5
7	...lead a group	1	2	3	4	5
8	...get ready for a job	1	2	3	4	5
9	...plan my career	1	2	3	4	5
10	...speak publicly	1	2	3	4	5
11	...write more clearly	1	2	3	4	5
12	...resolve conflicts	1	2	3	4	5
13	...sew	1	2	3	4	5
14	...cook	1	2	3	4	5
15	...groom an animal/pet	1	2	3	4	5
16	...feed & care for animal/pet	1	2	3	4	5
17	...lead a healthier lifestyle	1	2	3	4	5
18	...use a computer or other technology	1	2	3	4	5
19	...learn photography or other media	1	2	3	4	5

## References

- Babbie, E. (2001). *The practice of social research* (9<sup>th</sup> ed.). Belmont, CA: Wadsworth/Thomas Learning.
- Bryman, A. (2001). *Social science research*. New York: Oxford University Press.
- Dziuban, C. D., & Shirkey, E. C. (1974). When is a correlation matrix appropriate for factor analysis? Some decision rules. *Psychological Bulletin*, 81(6), 358-361.
- Hendricks, P. (1998). *Developing youth curriculum using the targeting life skills model: Incorporating developmentally appropriate learning opportunities to assess impact of life skill development* (Tech. Rep. No. 4H-137A). Ames: Iowa State University Extension.
- Howard, J.W., Boleman, C.T., Alvey, A., Burkhum, A.B. Chitek, K.D., Stone, C.C. et. al. (2001). Developing a program evaluation instrument for Texas 4-H: A work in progress. *Journal of Extension*, 39(4), Retrieved on January 7, 2005, from <http://www.joe.org/joe/2001august/iw4.html>.
- Kleinbaum, D. G., Kupper, L. L., & Muller, K. E. (1988). *Applied regression analysis and other multivariable methods* (2<sup>nd</sup> ed.). Boston, MA: PWS-Kent Publishing.
- Loeser, D.M., Bailey, S.J., Benson, R.L. & Deen, M.Y. (2004). Measuring impacts with young audiences: Adapting a life-skills instrument for use with third to fifth grade youth. *Journal of Extension*, 42(4), Retrieved June 24, 2005, from <http://www.joe.org/joe/2004august/rb1.shtml>
- Perdhazur, E. J., & Schmelkin, L. P. (1991). *Measurement, design, and analysis: An integrated approach*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Santos, J.R. (1999). Conbach's Alpha: A tool for assess the reliability of scales. *Journal of Extension*, 37(2). Retrieved June 23, 2005, from <http://www.joe.org/joe/1999april/tt3.html>.
- Seevers, B.S., Dormody, T.J. & Clason, D.L. (1995). Developing a scale to research and evaluate youth leadership life skills development. *Journal of Agricultural Education*, 36(2)
- Thomas, C.L.. (2005). Reliability. In S. Mathison (Ed.), *Encyclopedia of evaluation*. Thousand Oaks, CA: Sage Publications.
- Tinsley, H. E. A., & Tinsley, D. J. (1987). Uses of factor analysis in counseling psychology research. *Journal of Counseling Psychology*, 34(4), 414-424.
- Zumbo, B.D. & Rupp, A.A. (2004). Responsible modeling of measurement data for appropriate inferences: Important advances in reliability and validity theory. In D. Kaplan (Ed.), *The Sage handbook of quantitative methodology for the social sciences*. Thousand Oaks, CA: Sage Publications.

---

---

## Findings from Five Out-of-School Time Focus Groups: Professional Development Preferences, Experiences and Recommendations for Future Planning

**Jennifer Buher-Kane**

Senior Research Coordinator, Out-of-School Time Resource Center  
Center for Research on Youth and Social Policy  
School of Social Policy and Practice  
University of Pennsylvania  
Philadelphia, PA  
[jbuher@sp2.upenn.edu](mailto:jbuher@sp2.upenn.edu)

**Nancy Peter, M.Ed.**

Director, Out-of School Time Resource Center  
Center for Research on Youth and Social Policy  
School of Social Policy and Practice  
University of Pennsylvania  
Philadelphia, PA  
[npeter@sp2.upenn.edu](mailto:npeter@sp2.upenn.edu)

**Stacy Olitsky, Ph.D.**

Consultant, Out-of-School Time Resource Center  
Center for Research on Youth and Social Policy  
School of Social Policy and Practice  
University of Pennsylvania  
Philadelphia, PA  
[solitsky@dolphin.upenn.edu](mailto:solitsky@dolphin.upenn.edu)

**Susan Kinnevy, Ph.D.**

Research Director, Center for Research on Youth and Social Policy  
School of Social Policy and Practice  
University of Pennsylvania  
Philadelphia, PA  
[kinnevy@sp2.upenn.edu](mailto:kinnevy@sp2.upenn.edu)



## Findings from Five Out-of-School Time Focus Groups: Professional Development Preferences, Experiences and Recommendations for Future Planning

Jennifer Buher-Kane, Nancy Peter, Stacy Olitsky and Susan Kinnevy  
University of Pennsylvania

**Abstract:** Evaluating professional development can assist with designing better programs in the future, yet survey instruments may not always capture the nuances of participant's experiences. Therefore, in order to develop better survey instruments, the Out-of-School Time Resource Center conducted a series of five focus groups. Questions pertained to participants' job-related needs, preferred types of professional development, characteristics of both "good" and "bad" workshops, reasons why new information is not utilized, and recommendations for policymakers/funders. Findings from the focus groups have been used to revise OSTRC pilot surveys, which will be standardized and published as an Evaluation Toolkit that can be used to design and evaluate OST conferences.

### Background

The success of out-of-school time (OST) programs depends on having skilled, knowledgeable, and effective staff working with youth (e.g. Lauer, 2004). However, professional development opportunities for youth workers are generally infrequent and/or inadequate (e.g. Halpern, 1999). The Out-of-School Time Resource Center (OSTRC) at the University of Pennsylvania is conducting a mixed method pilot study to design survey instruments that can assess the effectiveness of out-of-school time professional development in workshop and conference settings. These instruments include Post-Workshop Surveys, Follow-Up Surveys (completed one month later), Presenter Self-Assessments, and Overall Conference Surveys.

As of July 2005, the OSTRC has evaluated three major local and regional OST conferences and two networking meetings, during which the initial phases of the surveys were tested. The OSTRC also conducted a series of five focus groups with local OST program staff. The focus groups were designed to inform the development of the survey instruments by obtaining more detailed data regarding program needs, professional needs, and participants' experiences with professional development in a variety of settings.

This paper discusses the findings from the OSTRC focus groups and outlines recommendations for providers, and planners, of professional development.



## Data and Methods

The purpose of the focus groups was to determine how participants feel they benefit from professional development, specifically in terms of effecting positive change in participants' skills, knowledge and attitudes. Two of the focus groups were offered to out-of-school time (OST) administrative staff, and three were offered to OST direct-service staff. A total of fifty staff participated in the focus groups, each of which was three hours long.

During the focus groups, professional development was defined as "Workshops, conferences, technical assistance, resource centers, peer mentoring, electronic listservs, and other supports designed to promote improvement, enrichment, and achievement in OST staff, programs and students." Participants were asked a series of questions regarding their professional needs, experiences, and preferences.

## Results

Significant trends among the oral responses to each question are summarized below:

### Job-Related Needs

Participants were asked, "What do you need to do your job better?" Many participants made multiple comments in response to this topic. These comments varied widely in terms of their content. The following represents the seven most frequently stated needs; less frequent responses were collapsed into a single "other" category.

<b>Job-Related Needs</b>	<b>Frequency (N=190)</b>
More staff	32
Increased communication within the organization / More staff meetings	21
Increased communication and/or involvement with parents	18
More physical resources	18
Participation in higher education	16
More funding	14
More opportunities to network with other OST staff	9
Other	62

### Preferred Method of Meeting These Job-Related Needs

Participants were given a list of various types of professional development opportunities compiled by the OSTRC that was developed based on previous meetings and discussions with professionals in the field. In response to the question, "What is your preferred method of meeting these job-related needs?" participants cited the following preferences:

<b>Preferred Type of Professional Development</b>	<b>Frequency (N=21)</b>
Formal Networking Group	5
Onsite Trainings	5
Program Observation	2
Peer Mentoring	2
Other	7

### Characteristics of “Good Workshops” (N=164)

Participants were given the opportunity to answer: “What are some characteristics of good workshops you have attended?” The following characteristics were cited most frequently among all participants: incorporated physical/hands-on activities (n=42), covered relevant content (n=21), modeled new activities (n=17), provided new activity ideas (n=13) or provided relevant materials (n=7).

Each of these characteristics was associated with an increased tendency to apply what was learned in a workshop, to share this new knowledge with others, and to benefit program youth.

### Characteristics of “Bad Workshops” (N=59)

Participants were then asked, “What are some characteristics of bad workshops you have attended?” Most frequently, they cited the following: content was not relevant/too basic (n=19), did not incorporate interactive activities (n=9), was a waste of time (n=8), or was used as a time to vent frustration without working to solve a problem (n=5).

Also cited were various characteristics relating to the presenter. Although responses represented a wide variety of characteristics, the six most frequently stated answers are below:

“Bad Workshop” Characteristics Associated with Presenter(s)	Frequency (N=110)
Did not portray expertise in the topic	14
Did not maintain positive environment	14
Did not gain the respect of the audience	12
Did not provide time to ask questions	10
Used poor presentation skills	9
Was not well prepared or organized	8
Other	43

### Reasons Participants Do Not Apply New Information Learned in Workshops

The OSTRC asked participants, “What are some reasons you don’t apply what you learned in workshops?” Participants most often responded that they did not use what they learned because of:

Reasons New Information Learned in Workshops is Not Applied	Frequency (N=68)
Lack of support from other staff / Not all staff attended training	19
Lack of time	11
Content not relevant and/or practical	11
Not held accountable to apply new information	4
Presenter did not provide follow-up assistance	4
Workshop material sits in their “To Do” box or on their office shelf.	4
Other	15

**Most Beneficial Component of a Workshop (N=84)** (Responses total more than 50 because some participants gave multiple responses.)

Workshops can promote changes in knowledge, changes in skill, and/or changes in attitude toward or appreciation of a topic. Focus group participants were asked, "What makes a workshop beneficial? Was it the most beneficial because of the knowledge/content you learned, the skills you acquired, or the change in your attitude/appreciation towards the topic?" Participants most often cited: changes in their attitude in the importance of this topic (n=33), then changes in their level of skill (n=29), and lastly changes in their knowledge (n=22).

### **Participants' Recommendations for Policymakers and/or Funders (N=7)**

Lastly, participants were given the opportunity to answer, "What recommendations do you have for policymakers and/or funders?" Participants' recommendations were as follows:

- increase communication between OST staff and policymakers/funders (n=2),
- hold more focus groups (n=1),
- have more networking opportunities (n=1),
- have advocates represent OST program needs to policymakers/funders (n=1),
- balance the need for continuous learning with an appropriate amount of professional development (n=1), or increase youth participation (n=1).

## **Discussion**

Those who provide and/or plan professional development for OST staff could benefit from integrating some of these findings into future opportunities. For example, professional development for OST staff should include "Formal Networking Groups" and "Onsite Trainings" in addition to the more common format, "Offsite Training". It is also important to encourage planners of professional development to provide workshops that are interactive, discuss relevant content, model new activities, and are presented by individuals who utilize adult learning theory principles within the training. Further, attention needs to be given to uses in the workplace that extend beyond the time period of a workshop. "Lack of support from other staff / Not all staff attend training" was cited most often as the reason participants do not apply what was learned within a workshop, once they return to their work settings. Therefore, it is important to schedule professional development at times that are convenient for many staff to attend. Lack of time within the workplace is another significant barrier to application of new knowledge. By allowing participants time *within* a professional development session to plan how they will apply new information learned, they might be more likely to use what they learn.

The findings from these focus groups have been used to revise the surveys in the OSTRC pilot study. Some trends have been added to the surveys as questions, while other information has been used to inform the analysis of the survey data. A few examples of additional survey questions include:

- Post Workshop Survey Questions:
  - "Did more than one staff from your program attend this training?"
  - "Was this session interactive or include hands-on activities?"
  - "Did this workshop show you how to use new knowledge/skills?"
  - "Was this workshop a good use of your time?"
  - "Did the presenter(s) provide some form of follow-up assistance (i.e. contact information for questions, a website to reference, etc.)?"
  - "Did the presenter(s) portray expertise in this topic area?"
  - "Did the presenter(s) maintain a respectful environment?"
  - "Did the presenter(s) gain the respect of the audience?"
- Follow-Up Workshop Survey Questions:
  - "Were you held accountable to use this new knowledge/skill?"
  - "Did the workshop material sit in your 'To Do' box or on your office shelf?"

The data analysis from the entire pilot study will contribute to a final revision of the surveys, which will be tested one last time. The OSTRC will then standardize and publish these surveys as part of an Evaluation Toolkit that can be used to design and evaluate OST conferences – conferences which optimally benefit staff, programs, and students.

Future research in this area could enhance OST professional development, on a national level, by further exploring these themes. These questions may also be beneficial if focus groups are replicated with local OST staff, and the information used to inform the development of subsequent opportunities.

## References

Halpern, R. (1999). After-school programs for low-income children: Promise and challenges. *The Future of Children*, 9, 81-93.

Lauver, S. (2004). Issue Topic: Evaluating Out-of-School Time Program Quality. *The Evaluation Exchange*, 10 (1).



---

## Nebraska 4-H Household Technology and Interest Survey

**Bradley S. Barker, Ph.D.**

University of Nebraska-Lincoln

(402) 472-9008

Fax (402) 472-9024

114 Agricultural Hall

Lincoln, NE 68583-0700

bbarker@unl.edu

Date of Submission 1/26/06

**Debra K. Meier**

Nebraska 4-H

114 Agricultural Hall

Lincoln, NE 68583-0700

dmeier1@unl.edu



## Nebraska 4-H Household Technology and Interest Survey

Bradley S. Barker, Ph.D. and Debra K. Meier  
University of Nebraska-Lincoln

**Abstract:** Nationally, 4-H has placed renewed emphasis in the areas of Science and Technology as a way to prepare youth for the 21<sup>st</sup> century workplace. Home access may become necessary to youth as they develop science and technology literacy via 4-H programs. A survey was sent to a random sample of 1,414 Nebraska families from a total population of 13,516. The survey examined the percentage of families that have access to computers and the Internet at home, computer components, use characteristics and specific areas of interest in science and technology. Results indicate that 96 percent of Nebraska 4-H families have access to computers at home. Nearly 92 percent of families had a connection to the Internet with a majority using dial-up connections. Families are interested in technology programs focused on basic computer knowledge and office application. In science, 4-H families indicated environment sciences and botany were areas of interest.

### Introduction

Nationally, 4-H has placed renewed emphasis in the areas of Science and Technology as a way to prepare youth for the 21<sup>st</sup> century workplace (The National 4-H Strategic Directions Team, 2001). In addition, new program delivery methods utilizing computers and the Internet have obtained increased importance in 4-H curriculum development, programming, and communications.

Therefore, participation in 4-H program areas will most likely require access to computers and to some extent the Internet. For example, the National 4-H Cooperative Curriculum Systems 2006 Geospatial curriculum will be delivered on four CD-ROMs with supplemental materials available via a website.

While over 92% of children have access to computers at schools their time may be limited since resources are shared with other students (U.S. Census Bureau, 2003). As a consequence, home access may become increasingly important to children as they develop science and technology literacy via 4-H programs.

According to the U.S. Census Bureau (2003) more than 39 percent of households do not have a computer and 45 percent do not have Internet access at home. The diversification of 4-H curriculum into science and technology program areas and the use of electronic delivery methods necessitate the examination of computer and Internet accessibility in 4-H households.

### Purpose

The purpose of the study was to investigate what technologies Nebraska 4-H families have in their home. In addition, the study was conducted to identify areas of science and technology 4-H families thought were important. The objectives were to:

- 1) Determine the percentage of families that have access to computers at home and inventory the current state of their technology and describe computer use characteristics.
- 2) Determine the percentage of families that have access to the internet and determine potential barriers to access.
- 3) Determine specific areas of interest in science and technology as measured by a self-reported interests inventory

### Procedure

#### Population

A random sample of 1,414 families out of a total population of 13,516 Nebraska 4-H families, was selected from the 2004 4-H Plus database. Randomly selected families were sent the paper-based survey via US mail with a pre-paid return envelope. A postcard was mailed approximately two weeks before the survey was mailed to inform selected families of the upcoming study. Follow-up postcards were sent after two, four and six weeks to participants who had not returned the survey.

#### Instrument

A 19-question survey was developed based on the U.S. Census Bureau's *Computer and Internet Use in the United States: 2003* survey instrument. The survey consisted of 19 questions with a variety of response scales including yes/no questions, 4-point Likert-type scales and one open-ended question.

To begin, respondents were asked if they had a computer, if not they skipped to question 12 of the survey. Questions 2 through 11 of the survey explored topics pertaining to computers such as operating system, year purchased, components and Internet access. Question 12 asked the main reason for not having a computer. Questions 16 and 18 utilize a 4-point Likert-type scale for questions regarding the priority of different technology and science areas where 1 = not a priority and a 4 = high priority. In questions 17 and 19 respondents were asked to rank the first, second and third most important technology and science areas.

### Content Validity and Reliability

The overall response rate to the survey was 33.6 percent. The confidence interval at the 95% confidence level is 4.41 indicating that the responses are accurate 95% of the time plus or minus 4.41 points from the reported mean.

Since the majority of the survey comes from the U.S. Census, the questions have been pre-tested and reviewed by experts and therefore are deemed to be valid. The results of a Cronbach alpha test for homogeneity of the 19 item instrument revealed a very high standardized alpha coefficient ( $r=.96$ ). The high reliability coefficient indicates that the test halves are highly correlated and the questionnaire has high internal consistency.

To address the potential of non-response error, the initial respondents were differentiated into two groups. The first group, early respondents, consisted of respondents that returned their surveys from April to the end of June, 2005. The second group, late respondents, consisted of respondents that returned the survey on July 1, 2005 up to the indicated due date. An independent samples  $t$  test was conducted to determine if there were any significant differences between the mean scores of early and late groups based on each question. No significant differences were found between the groups on any question in the survey including the existence of a computer in the household ( $t(20.66) = -.938, p = .359$ , equal variances not assumed).

In addition, a random sample of 100 additional surveys was sent to the initial group's non respondents to determine if scores were significantly different than the initial respondents. Fifteen surveys were returned by the second-round respondents for a response rate of 15 percent. Due to low statistical power, the second round respondents were combined with the late respondents to create a new group with a sample size of 34 (Linder, Murphy & Briers, 2001).

Additional independent samples  $t$  test were conducted to determine if there were any significant differences between the mean scores of early respondents and the combined group of late respondents and second round respondents on the existence of a computer in the household and high-speed internet. No significant differences were found between the groups on the existence of a computer in the household ( $t(486) = .703, p = .482$ ) or the use of high-speed Internet access ( $t(468) = -1.39, p = .166$ ).

## Results

### Computer Characteristics

Overall, 96.4% of respondents said they had a computer at home. A majority of respondents use Windows XP (57.5%), followed by Windows 98 (21.9%) and Windows 2000 (10.5%) see Table 1. Close to 32% of 4-H families had two or more computers in the home with the newest computer being purchased in 2004 (26.3%) see Table 2. Most (93.8%) of computers systems had a CD-ROM, however, less than half (49%) had a DVD drive see Table 3.

**Table 1**  
Current Operating System

Operating System								
	WinXP	Win98	Win2000	WinME	Mac OSX	Other	Mac OS9	No Computer
Count	257	98	47	33	8	2	1	1
Percent	57.5%	21.9%	10.5%	7.4%	1.8%	.4%	.2%	.2%



**Table 2**

## Year newest computer obtained

Year the newest computer was obtained								
	None	2005	2004	2003	2002	2001	2000	Before 2000
Count	1	54	119	89	61	36	46	48
Percent	.2%	11.9%	26.3%	19.6%	13.5%	7.9%	10.2%	10.6%

**Table 3**

## Computer Components

Does your primary computer have the following																
	CD-ROM		DVD		CD-ROM Burner		DVD Burner		USB		Firewire		AGP		Wireless	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Count	28	427	232	223	154	301	351	104	151	304	360	94	357	97	395	59
Percent	6.2	93.8	51	49	33.8	66.2	77.1	22.9	33.2	66.8	79.3	20.7	78.6	21.4	87	13

**Internet Access**

Overall, 8.4% of respondents did not have access to the Internet. Most (53.1%) used a dial-up account; 20.9% had a DSL connection while 8.4% and 5.7% had cable and satellite connections respectively as shown in Table 4. A majority of respondents (51%) do not have high speed access. The most likely barriers to high speed access included costs (31.3%) and availability (16.4%) see Table 6. When connecting to the Internet, most respondents use Internet Explorer (85.9%) followed by Netscape Navigator (16.2%) and Mozilla Firefox (6.3%).

**Table 4**

## Internet Access

Do you currently access the Internet using						
	Dial-up	DSL	No Access	Cable	Satellite	Other
Count	241	95	42	38	26	12
Percent	53.1%	20.9%	9.3%	8.4%	5.7%	2.6%

**Table 5**

## High Speed Internet Access

Do you have high-speed Internet access			
	No internet access	Yes	No
Count	38	185	232
Percent	8.4%	40.7%	51.0%

**Table 6**

## Reasons for not having high-speed access

Reason for not having high-speed Internet							
	Costs	Have high-speed	Not available	Don't need	Use elsewhere	Other	Privacy and Security
Count	149	137	78	26	15	6	5
Percent	35.8%	32.9%	18.8%	6.3%	3.6%	1.4%	1.2%

### Computer Use

The primary reported uses of the computer in the home were school related (82.2%), Email use (79.8%), work related (57.1%) and games (50.1%) (Table 7). Other or secondary uses of the computer reported were: word processing (88.3%), Email (87.7%), and spreadsheet /database use (57.5%) (Table 8). Finally, 65.5% of the respondents indicated they had a digital camera and 24.2% indicated they had a digital video camera in the household.

**Table 7**  
Primary computer use

Primary use of the computer at home												
	School - homework		Email		Work		Games		Other		No Computer	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Count	81	374	92	363	195	260	227	228	407	48	454	1
Percent	17.8	82.2	20.2	79.8	42.9	57.1	49.9	50.1	89.5	10.5	99.8	0.2

**Table 8**  
Other uses of computer at Home

Other uses of the computer at home														
	Word processing		Email		Spreadsheets and database		Manipulate graphics and video		Web Pages		Programming		Other	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Count	53	401	56	398	193	261	326	128	336	118	418	36	411	43
Percent	11.7	88.3	12.3	87.7	42.5	57.5	71.8	28.2	74.0	26.0	92.1	7.9%	90.5	9.5

Note: One respondent indicated they did not have a computer for 0.2%.

For those respondents that reported that they did not have a computer, 2.4% indicated the reason was that costs were too high while 0.9% indicated they could use a computer at another location (Table 9).

**Table 9**  
Main reasons for not having a computer at home

Main reason for not having a computer				
	Have a computer	Costs are too high	Can use elsewhere	Other
Count	442	11	4	3
Row N %	96.1%	2.4%	.9%	.7%

### Technology and Science Interest Areas

Participants were asked to indicate their interests' in areas of technology. The interest areas were scored on a 4-point Likert-type system where NOT = 1, LOW = 2, MEDIUM = 3, and HIGH = 4. Overall, the technology areas with the highest mean scores were basic computer knowledge and office applications where the mean scores were 3.47 and 3.42 respectively (Table 10). The results are also broken down by districts. In Nebraska there are four districts: the Northeast (NE), Southeast (SE), Panhandle (PH) and West Central (WC). Not surprisingly, when asked to rank the most important development areas, overall, 58% selected the basic computer knowledge area, followed by office applications (44%) and graphic arts (17%) (Tables 11-13).

**Table 10**

Technology Interest areas by district and total

District		Basic Computer Knowledge	Web Sites	Office Application	Graphic Arts	Digital Movie Creation	Computer programming	Network	GIS/GPS	Robots
NE	<u>M</u>	3.43	2.79	3.37	2.93	2.63	2.76	2.69	2.50	2.19
	<u>n</u>	135	134	133	134	134	133	132	124	127
	<u>SD</u>	.833	.716	.764	.717	.753	.780	.783	.781	.774
PH	<u>M</u>	3.62	2.79	3.50	3.00	2.60	3.00	2.91	2.69	2.40
	<u>n</u>	58	57	58	57	57	57	57	55	53
	<u>SD</u>	.721	.901	.731	.802	.863	.866	.851	.879	.840
SE	<u>M</u>	3.46	2.75	3.42	2.99	2.63	2.67	2.68	2.51	2.38
	<u>n</u>	197	201	200	199	200	198	197	170	185
	<u>SD</u>	.817	.805	.697	.703	.829	.878	.873	.885	.820
WC	<u>M</u>	3.43	2.86	3.45	3.11	2.74	2.73	2.88	2.73	2.66
	<u>n</u>	70	71	71	70	70	71	69	62	64
	<u>SD</u>	.827	.867	.789	.772	.912	.878	.883	.908	.859
Total	<u>M</u>	3.47	2.78	3.42	2.99	2.64	2.74	2.73	2.56	2.36
	<u>n</u>	465	468	467	465	466	464	460	416	434
	<u>SD</u>	.809	.800	.732	.731	.824	.856	.855	.865	.829

**Table 11**

Percentage break down of those areas ranked *MOST* important technology area.

Most important area										
	Basic Computer Knowledge	Office Application	Missing	Web Sites	Graphic Arts	Program	Digital Movie Creation	Robots	GIS/GPS	Network
Count	278	62	38	31	28	10	10	7	7	5
Percent	58.4%	13.0%	8.0%	6.5%	5.9%	2.1%	2.1%	1.5%	1.5%	1.1%

**Table 12**

Percentage break down of those areas ranked *SECOND MOST* important technology area.

Second important area										
	Office Application	Web Sites	Missing	Graphic Arts	Basic Computer Knowledge	Program	Digital Movie Creation	Network	GIS/GPS	Robots
Count	210	63	40	40	34	30	23	15	14	5
Percent	44.3%	13.3%	8.4%	8.4%	7.2%	6.3%	4.9%	3.2%	3.0%	1.1%

**Table 13**

Percentage break down of those areas ranked *THIRD MOST* important technology area.

Third important area										
	Graphic Arts	Web Sites	Program	Missing	Office Application	Network	Digital Movie Creation	GIS/GPS	Basic Computer Knowledge	Robots
Count	210	63	40	40	34	30	23	15	14	5
Percent	44.3%	13.3%	8.4%	8.4%	7.2%	6.3%	4.9%	3.2%	3.0%	1.1%

The science interest areas with the highest mean scores were Environment Sciences, Botany, and Zoology, where the mean scores were 3.44, 3.42 and 3.33 respectively (Table 14). Overall, Environmental Sciences were ranked the most important development area by 25% of the respondents followed by Botany (21%) and Botany/Zoology (15%) (Tables 15-17). Again, the ranking for priority science development areas follows the ranking of science interest areas with Environmental Sciences ranked number one, followed by Botany and Zoology.

**Table 14**  
Science Interest areas by district and total

District		Biochemistry (Molecular biology, photosynthesis, food chemistry)	Botany (Agronomy, horticulture, forestry, plant taxonomy, plant physiology)	Chemistry (Physical chemistry, organic chemistry pesticides, soil chemistry)	Earth and Space Sciences (Geology, meteorology, geography, topography, mineralogy, archaeology)	Engineering (Civil, mechanical, aeronautical, electrical, bioengineering, lasers)	Environmental Sciences	Physics (Solid state, optics, acoustics, fluid and gas dynamics,)	Zoology (Animal genetics, entomology, animal ecology, anatomy, paleontology)
NE	M	2.91	3.31	3.12	3.02	2.99	3.46	2.80	3.24
	n	125	128	127	127	128	129	127	128
	SD	.730	.612	.662	.672	.748	.612	.749	.661
PH	M	2.96	3.47	3.09	3.22	3.25	3.40	2.80	3.47
	n	53	55	55	55	55	55	55	55
	SD	.831	.716	.800	.809	.865	.784	.826	.742
SE	M	2.89	3.45	3.17	3.17	3.07	3.43	2.74	3.30
	n	192	193	193	193	194	192	193	193
	SD	.743	.585	.651	.656	.749	.660	.767	.693
WC	M	3.09	3.54	3.16	3.36	3.01	3.49	2.85	3.48
	n	67	68	68	67	68	67	67	66
	SD	.883	.656	.803	.667	.782	.786	.744	.685
Total	M	2.93	3.42	3.14	3.16	3.06	3.44	2.77	3.33
	n	442	449	448	447	450	448	447	447
	SD	.775	.629	.697	.690	.769	.683	.764	.696

**Table 15**  
Percentage break down of those areas ranked *MOST* important science area.

Most important area									
	Environment	Botany	Missing	Zoology	Earth/Space	Biochemistry	Engineering	Chemistry	Physics
Count	118	90	73	66	33	33	30	24	7
Percent	24.9%	19.0%	15.4%	13.9%	7.0%	7.0%	6.3%	5.1%	1.5%

**Table 16**  
Percentage break down of those areas ranked *SECOND MOST* important technology area.

Second important area									
	Botany	Environment	Missing	Zoology	Earth/Space	Chemistry	Engineering	Biochemistry	Physics
Count	101	77	74	69	48	42	29	25	9
Percent	21.3%	16.2%	15.6%	14.6%	10.1%	8.9%	6.1%	5.3%	1.9%

**Table 17**

Percentage break down of those areas ranked *THIRD MOST* important technology area.

Second important area									
	Missing	Botany	Zoology	Environment	Earth/Space	Chemistry	Engineering	Biochemistry	Physics
Count	83	74	71	59	52	45	42	24	23
Percent	17.5%	15.6%	15.0%	12.5%	11.0%	9.5%	8.9%	5.1%	4.9%

### **Limitations and Implementation for Practice and Research**

Initially, it would appear that a limitation of this study was the low response rate. However, every effort was made to increase the response rate by sending out a pre survey notice and three follow-up reminders to non-respondents (Mangione, 1995; Salant & Dillman, 1994). Furthermore, participants were selected from a true random sampling of the population being studied, thereby increasing the statistical likelihood that the sample represents the population (Mangione, 1995).

Moreover, two techniques, comparing early to late responders and comparing initial-round responses to second-round responses, were employed to control for the non-response error and no significant differences were found (Linder, Murphy & Briers, 2001; Linder & Wingenbach, 2002). In addition, the findings of this survey are in-line with the U.S Census (2003) findings that 83.4 percent of families with children enrolled in grades K-12 have a computer at home.

This study asked three main questions:

- the percentage of Nebraska 4-H families with a computer at home,
- if 4-H families have access to the Internet, and
- to examine areas of interest in technology and science.

First, over 96 percent of Nebraska 4-H families have access to computers at home. In addition, a majority of these systems were less than three years old. Secondly, nearly 92 percent of families had a connection to the Internet from their home with a majority of families using dial-up connections. Finally, families are interested in technology programs focused on basic computer knowledge and office application. In science, 4-H families indicated environment sciences and botany were areas of interest.

The results of this study suggest that 4-H families in Nebraska have adequate computer technologies in their homes to take advantage of computer-based, on-line 4-H programs. The results also indicate that 4-H programs can be delivered over the Internet but that download speeds may be an issue with a majority of households using a low bandwidth dial-up connection. Therefore, hybrid delivery systems that utilize multiple technologies to deliver mediated content may be considered as an alternative delivery solution. A hybrid system would allow large media files to be delivered via a CD-ROM while linked to smaller media files that can be easily delivered on-line. Additionally, the use of DVD's may not be an appropriate delivery solution due to the slow adoption of DVD drives in home computer systems.

## Conclusion

Due to the difference in demographics between states, the findings of this study cannot be generalized to the entire population of 4-H families in the country. However, the findings suggest trends in the adaptation of technology by Nebraska 4-H families thereby providing directions for the Nebraska 4-H science and technology programs and the consideration of electronic delivery methods.

Additional studies are needed to clarify the results of this survey; especially in regards to comparing technologies at home in the rural areas of Nebraska with those in more densely populated areas of Nebraska. For the present, these findings suggest that no significant technological barriers exist in the homes of Nebraska 4-H families regarding 4-H science and technology programs and mediated delivery methods and that less than 9% of families would be currently excluded from participating in programs that required computers and Internet access at home.

These findings can also offer other youth agencies, serving rural populations, a method for obtaining household technology information and the demographics of the populations they serve. This type of information can provide means for new development in programming, curriculum, and communications.

## References

- Day, J.C., Janus, A., & Davis, J. (2003). Computer and Internet Use in the United States: 2003. U.S. Census Bureau . On-line: <http://www.census.gov/prod/2005pubs/p23-208.pdf>
- Lindner, J. R., Murphy, T. H., & Briers, G. E. (2001). Handling nonresponse in social science research. *Journal of Agricultural Education*, 42(4), 4353.
- Lindner, J. R., & Wingenbach, G. J. (2002). Communicating the handling of nonresponse error in research in brief articles. *Journal of Extension* 40 (6). On-line: <http://www.joe.org/joe/2002december/rb1.shtml>
- Mangione, T.W. (1995). Mail Surveys: Improving the Quality. Thousand Oaks, CA: Sage Publications.
- Salant, P., & Dillman, D. A. (1994). How to conduct your own survey. New York, NY: [John Wiley & Sons](#).
- The National 4-H Strategic Directions Team (2001). The power of youth in a changing world: The national 4-H strategic plan. On-line: <http://www.national4-hheadquarters.gov/library/summary.pdf>



---

## Youth Development and Extension Family and Consumer Sciences

Jan F. Scholl, PhD, CFCS  
Associate Professor  
4-H Specialist, FCS Programs  
The Pennsylvania State University  
[jscholl@psu.edu](mailto:jscholl@psu.edu)



## Youth Development and Extension Family and Consumer Sciences

Jan F. Scholl  
The Pennsylvania State University

**Abstract:** *Youth Development and Extension Family and Consumer Sciences* is the theme of a special issue of the 2006 Journal of the National Extension Association of Family and Consumer Sciences. The 2006 issue includes seven peer-reviewed articles, research abstracts and resource bibliographies.

Topics are:

- conflict management for parents of teens,
- strengthening families through 4-H involvement,
- sexual abstinence for unmarried adolescents,
- youth entrepreneurship,
- effectiveness of EFNEP paraprofessionals,
- evaluation of a 4-H food camp and
- the history of the 4-H quilt block.

Abstracts of award winning research, scholarships and travel programs are also provided as are conference topics, resource bibliographies of family and consumer science-related articles in other refereed journals, and submission requirements for potential authors. The theme of the journal for 2007 is *Extension Family and Consumer Sciences: Past and Present*.

If you are not a member of NEAFCS, perhaps a co-worker will share their copy of this journal. NEAFCS publications subscription price is \$10 per year for non-members and is included in national membership dues. To order a copy of the 2006 youth development issue, send your \$10 fee to: NEAFCS, subscriptions, PO Box 849, Winchester, VA 22604-0849.

### References

Scholl, J. (ed.) (2006). *Journal of NEAFCS*. Winchester, VA: National Association of Extension Family & Consumer Sciences.





---

## *Guidelines for Submitting Manuscripts*

Authors are asked to follow the guidelines below to ensure their submissions will be accepted for review:

A. Manuscripts for **Feature Articles** should be approximately 2,000-5,000 words. These articles are informational, explanatory, or critical analysis and interpretation of major trends or comprehensive reviews. Articles have clear implications for youth development practice and programming and are grounded in original research or are based on cutting-edge research. Feature articles selected for publication generally will answer the following questions:

- Is the information based on current research and/or an explicit theory of change?
- In the case of original research articles did the author explicitly state methodology, analysis, results and specific implications for practice?
- What are the implications for youth development research, practice, and/or programs?

B. Manuscripts for **Program Articles** should be approximately 1,500 words, although longer articles are accepted when appropriate. A program article is an article describing a unique, successful, or promising youth development program. Program articles chosen for publication will generally answer the following questions:

- What are the purposes, activities, and audience for the program?
- What made the program a success (or why does it promise to be a successful program)? What are the impacts?
- After reading the article, how can youth development professionals emulate it or seek funding and other resources to implement it?

C. Articles for **Research and Evaluation Strategies** should be approximately 1,000 words, although longer articles are accepted when appropriate. They describe innovative methodologies and strategies in the collection and analysis of quantitative or qualitative research and evaluation data.

D. **Resource Reviews** articles should be approximately 300 words in length. Contributions to the Resource Reviews provide a critical analysis of books, videos, curricula, and other tools that may be helpful to youth development professionals. The value and limitations of the resources should be noted. Readers should gain a clear idea of how this resource be used by a youth development practitioners. The materials under review must be thoroughly identified, including author, publisher, date of publication, and information on how to obtain a copy of the materials.

**Below are guidelines for submitting any type of article:**

- Manuscripts should be in block style (no indent or tabs). Information in columns must be put in a table format.
- American Psychological Association (APA) is the required style.
- The *Journal of Youth Development ~ Bridging Research and Practice* is published on the World Wide Web. This means that special attention should be paid to formatting for on-screen reading. Include shorter paragraphs (e.g., 100 words), bulleted and numbered lists, and subheadings.
  
- Authors should include a cover page that lists the title of the article, author's name, official title and affiliation, office contact information (address, phone, and FAX numbers, electronic-mail addresses), and the date of submission.
- Authors should submit with the manuscript a brief abstract (not to exceed 150 words) and suggested key words for use in indexing. Please indicate the type of manuscript submitted, such as feature article, program article, etc.
- Submitted manuscripts should contain only non-previously published material and should not be under consideration by other publications, unless the editor grants special permission.
- It is the author's responsibility to obtain any necessary written permission for use of copyrighted material contained within the article.
- Authors are responsible for the accuracy of all citations, references, and bibliographies.

Authors are responsible for specifying approval by an institutional ethics committee for research involving human subjects, if applicable.

**How to Send Manuscripts:**

- Authors should submit their manuscripts electronically as an attachment to an e-mail. Word, WordPerfect, or hypertext markup language (HTML) is accepted.
  
- Manuscripts should be sent to the editor:  
Patricia Dawson  
[Patricia.dawson@oregonstate.edu](mailto:Patricia.dawson@oregonstate.edu)  
PO Box 100  
2411 NW Carden – Umatilla Hall Room 100  
Pendleton, Oregon 97801  
541-278-5404