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## Assessment of a Workplace Program's Capability to Teach Communication and Problem-Solving Skills

Natalie M. Ferry

*Penn State Cooperative Extension*, nmf3@psu.edu



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## Assessment of a Workplace Program's Capability to Teach Communication and Problem-Solving Skills

### Abstract

Low-income individuals' lack of personal skills can be a barrier to workplace success. Using the Skills for Taking Control of Your Future curriculum, Extension educators taught communication and decision-making skills to enhance individuals' workplace competency. Pre/post assessments were designed to collect data on effectiveness of the curriculum to increase the use of communication and decision-making skill components in everyday situations. Using a test of significance for differences in means, socio-demographic group scores were analyzed for pre-post significant differences. The outcome was positive for some groups, supporting the use of the curriculum to teach personal skills that enhance individuals' workplace effectiveness.

### Natalie M. Ferry

Coordinator of Special Program Initiatives  
Penn State Cooperative Extension  
University Park, Pennsylvania  
[nmf3@psu.edu](mailto:nmf3@psu.edu)

## Introduction and Background

For a large number of low-income workers, work is a vital link to moving out of poverty. Critical to their well-being is the ability to obtain and retain employment. However, low-income individuals often face significant barriers to sustaining employment. These are not only societal impediments, but also the personal limitations of lacking basic skills needed to be competent in the workplace (Monroe & Tiller, 2001). Growing up in a low-income context frequently does not prepare individuals with the personal skills that the middle-class workplace demands (Payne, 2001).

Today's employers are seeking employees who are capable of solving problems, making effective decisions, and communicating with co-workers and management. Low-income individuals often do not have these skills or a work ethic that meets employers' expectations (Owen, Steves, Nelson-Christenedaughter, Roy, & Heineman, 2000).

The 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) directed state welfare agencies to focus their efforts on providing clients with work-readiness skills. In response, the Skills for Taking Control of Your Future curriculum was designed to prepare individuals to become work-ready by assisting them in learning basic communication and decision-making skills. Penn State Cooperative Extension county educators were mobilized through in-service training to conduct programs using the curriculum within their local counties.

The curriculum is an interactive, hands-on, activity-based guide providing individuals with opportunities to experience and apply skills necessary for a wide range of workplace and family situations. Throughout the curriculum, communication and decision-making skills are practiced in relationship to various workplace issues. The curriculum includes 10 sessions with different topics ranging from identification of one's personal competencies matched to employment clusters, money management, personal coping strategies, and interpersonal family relationships.

## Purpose

The primary purpose of the study reported here was to determine which groups of low-income participants are able to most successfully learn communication and decision-making skills from the curriculum's content. Goals were: 1) to identify socio-demographic groups who had learned

components of communication and decision-making skills and 2) to identify those components that participants used more as a result of attending the training sessions.

## Methods and Procedures

Surveys were designed to measure the use of specific communication and decision-making skills. Survey questions were developed using a Likert scaling procedure. An initial pool of 50 communication and 50 decision-making components were reduced by a panel of expert judges to 24 communication and 30 decision-making items. These survey items were pilot tested with 75 volunteers. Based on this pre-testing, two protocols were finalized, one for communication and one for decision-making.

The final communication survey consisted of 24 items that described how an individual communicates with people in everyday life, such as an employer, co-workers, or friends. The 30 item decision-making survey described how one would solve problems in everyday life, such as those related to a job, money, or family. The surveys also collected demographic information.

The curriculum's impact was evaluated using pre and post surveys that produced an overall score for communication and decision making and provided scores for each component of communication and decision making. The surveys used a Likert Scaling system with a 1 to 5 rating (1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always).

The survey questions collected data on the overall gain in the use of the communication strategies (grand score) and on the use of these specific components of communication:

- Awareness of own style of verbal communication
- Awareness of own style of nonverbal communication
- Awareness of own style of listening
- Understanding and valuing different communication styles
- Practicing empathy in communicating
- Managing interactions

The same strategy was used to assess the overall gains in the use of decision-making strategies (grand score) and in the use of the following components of decision-making:

- Identify/define problem
- Identify possible solutions
- Select best solution
- Implement solution
- Redefine problem and revise solution
- Evaluate progress and final solution

Mean scores were calculated for each participant's communication and decision-making grand scores and for individual components of each specific skill or strategy. To determine if a difference between the learning and use of communication and decision-making strategies of participating socio-demographic groups occurred, the pre and post-mean scores were compared using SPSS to calculate z-scores (SPSS, 2000).

## Results

The evaluation population included 100 individuals, 83 females and 17 males, who live in one of two urban counties near Philadelphia. The respondents were predominately African American (61), followed by Hispanic (20), and non-Hispanic white (19). The largest number had high school diplomas, (41) while 24 had a GED, and 24 reported having 12 or less years of schooling. Eleven of the participants had some post high school training. Respondents participated in all 10 program sessions.

Comparisons are made between selected socio-demographic groups to determine if a statistically significant difference exists in the curriculum's effectiveness by educational attainment level, gender, and race/ethnicity. The 5 and 10% levels of significance were used, as shown in the tables of results. When a statistically significant change in a particular form of communication or decision-making skill was not found, the item is not reported. This provides insight into those forms of communication and decision-making skills for which learning occurred and the training did affect use.

### Gains by Educational Attainment Level

Those with a General Education Degree (GED) reported the most significant gains in learning and using both communication and decision-making strategies that were taught. For this group, their use of overall decision-making and communication skills were found to have improved based on means tests that were statistically significant at the 0.10 and 0.05 levels (10% and 5%), respectively. For those with a GED, the communication components that improved were: 1) awareness of own style of nonverbal communication, 2) awareness of own style of listening, 3) practicing empathy in communicating, and 4) managing interactions (Table 1). In each case the difference in the means was significant at the 10% level and in some cases at the 5% level.

Decision-making components that significantly increased were: 1) identify/define problem and 2) select best solution (Table 1). For the group of participants who had a high school diploma, a statistically significant increase for two communication components: 1) awareness of own style of nonverbal communication, and 2) understanding and valuing different communication styles (Table 1).

**Table 1.**  
Summary of Tests of Significance of Difference Between Means Scores by Educational Level

	Component Score Means		Difference of Level of Significance	
	Pre	Post		
Communication Components for GED Participants				
Communication overall score	84.96	91.38	5%	-2.339
Awareness of own style of nonverbal communication	13.52	14.87	10%	-1.792
Practicing empathy in communicating	14.61	15.70	10%	-1.736
Awareness of own style of listening	13.52	14.87	5%	-2.028
Managing interactions	13.78	15.30	5%	-2.104
Decision-Making Components for GED Participants				
Problem-solving overall score	108.79	116.50	10%	-1.731
Identify/define problem	18.83	17.79	5%	-2.030
Select best solution	18.38	20.17	5%	-2.151
Communication Components for HS Diploma Participants				
Awareness of own style of nonverbal communication	13.74	14.52	10%	-1.663
Understanding and valuing different communication styles	13.57	14.62	10%	-1.840

## Gender

When gender is considered, males increased their use of 1) awareness of own style of nonverbal communication and 2) understanding and valuing different communication styles, from their pre to post assessments. However, for the female participants, only their gain in awareness of own style of nonverbal communication was statistically significant (Table 2).

**Table 2.**  
Summary of Tests of Significance of Difference Between Means Scores by Gender

	Component Score Means		Difference of Level of Significance	
	Pre	Post		
Communication Components for Male Participants				
Awareness of own style of nonverbal communication	13.79	14.53	5%	-2.24
Understanding and valuing different communication styles	13.65	14.38	5%	-1.967
Communication Components for Female Participants				
Awareness of own style of nonverbal communication	13.70	14.36	10%	-1.80

### Race/Ethnicity

African Americans demonstrated the most significant effects resulting from participation in the training sessions. For African American participants, increases occurred in the following communication skill components: 1) awareness of own style of listening and 2) understanding and valuing different communication styles. For Hispanic participants, increases in awareness of own style of nonverbal communication was statistically significant at the 5% level of confidence. For the non-Hispanic white population, none of the communication or decision-making components increased, based on means tests.

**Table 3.**

Summary of Tests of Significance of Difference Between Means Scores by Race

	Component Score Means		Difference of Level of Significance	
	Pre	Post		
Communication Components for Black Participants				
Awareness of own style of nonverbal communication	13.00	13.83	10%	-1.869
Understanding and valuing different communication styles	13.07	14.05	5%	-1.980
Communication Components for Hispanic Participants				
Awareness of own style of nonverbal communication	14.68	16.05	5%	-2.095

Participant groups showing the most significant effects are male, African Americans, and those with a GED. The components of communication for which the most significant increases occurred were 1) awareness of own style of nonverbal communication and 2) understanding and valuing different communication styles. The only demographic group that showed a significant increase in both problem solving and communication skills was those who had a GED.

## Discussion and Implications

By learning more about the effectiveness of the Skills for Taking Control of Your Future curriculum to teach low-income individuals personal communication and decision-making skills, Extension county educators are more informed about how their teaching can affect hard-to-reach clientele. The study results support the curriculum's educational value. Calculating standardized scores provided a way to determine which of the taught strategies are more often being used as a result of training.

Designing the evaluation to provide feedback about the use of individual skill components provides a means to assess mastery of those elements as well as of the entire skill-building process. Most individuals are proficient at various levels in the use of components of a skill. It appears that learning an overall skill can be enhanced when individuals learn new ways or strategies that support more effective use of that skill.

Engaging low-income individuals in learning that enhances their skills expands their sense of efficacy and contributes to their expectations for positive outcomes (Lent, Hackett, & Brown, 1996). Unless individuals believe that they can succeed in the workplace through their own actions, they have little motivation to act or to persevere in the face of difficulties (Bandura, 1997).

Across all participant socio-demographic groups, the communication component of "awareness of own style of nonverbal communication" was reported as a learning outcome. Using this element of communication appears to support the individual's communication effectiveness.

Being capable of learning new skills requires that individuals recognize the need to learn new ways of performing. Through repeated use of a newly learned skill in various contexts, it becomes tacit knowledge and embedded in one's skills.

The challenge for the nonformal educator is to assist individuals in learning basic components of a skill. Once the skill is mastered, the next challenge is assisting the individual in applying the newly learned behavior successfully in varied contexts of their lives. Knowing that components of new behavioral strategies can be taught in nonformal educational sessions is a motivation for Extension professionals to assist individuals from low-income contexts to learn strategies assisting them to thrive in the workplace.

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