

## Developing Extension/Outreach Education in Tajikistan

### **Julie A. Albrecht, Ph.D.**

Associate Professor and Extension Food Specialist  
Department of Nutrition and Health Sciences  
University of Nebraska-Lincoln  
119 Ruth Leverton Hall  
Lincoln, NE 68583-0808  
Phone: 402-472-8884  
Fax: 402-472-1587  
Email address: [jalbrecht1@unl.edu](mailto:jalbrecht1@unl.edu)

### **Kathleen Prochaska-Cue, Ph.D.**

### **S. Kay Rockwell, Ph.D.**

### **Pulat A. Pulatov, Professor, Ph.D.**

#### **Abstract**

*The University of Nebraska-Lincoln (UNL) and the Khujand branch of the Technological University of Tajikistan (KbTUT) developed a collaborative program to help build a more stable economy in Tajikistan by providing extension/outreach education. Objectives were to provide outreach programs for community members by developing an entrepreneurial center and textile museum at KbTUT and to enhance subject matter expertise and experiential training in food science and textiles, clothing and design, micro-business development, entrepreneurship, and outreach/extension education for selected KbTUT faculty/upper level students and administrators who studied at UNL.*

*Sixteen KbTUT faculty and students participated in selected courses, workshops, and field experiences specific to food and textile entrepreneurship and the textile museum development; special educational sessions on adult education incorporated the extension education philosophy. In Tajikistan UNL faculty modeled workshops on small-scale businesses and business plan development for KbTUT faculty who are expected to teach such workshops.*

*The KbTUT Textile Museum and the Entrepreneur Center were established. Textile Department faculty started collecting items for the Textile Museum and opened their displays to the public. Entrepreneur Center faculty held community workshops on making jam, sewing, fabric dyeing techniques, and business plan development. KbTUT faculty revised, or developed new, courses to focus on a market-based economy. KbTUT faculty easily grasped the concepts to develop a textile museum, but the entrepreneur center and extension/outreach were new concepts and presented challenges.*

**Key words:** Extension/outreach education, Tajikistan, entrepreneurial education, food safety, textile museum, business plan development

### Introduction

Due to the fall of the Soviet Union in 1991 and the ensuing Civil War (1992-93) in Tajikistan, the country's decimated infrastructure and economy needed to be reestablished as a market-based economy. The Tajiks also wanted to reconnect to their heritage which was lost while they were a Soviet republic. Therefore, the Khujand branch of the Technological University of Tajikistan (KbTUT) and the University of Nebraska-Lincoln (UNL) collaborated to establish community based education by developing an entrepreneurial education/outreach center and a textile museum at KbTUT.

Tajikistan, a country created from the former Soviet Union in central Asia, is slightly smaller in size than USA's Wisconsin; their estimated population is 6.5 million (World Bank, 2006). The country is landlocked, the terrain is mountainous, and approximately seven percent of the land is suitable for agricultural production; there are no irrigation resources for agriculture. Subsidies withdrawn from Moscow in 1991 and the 1992-93 civil war destroyed much of the country's economic potential (United Nations Development Fund for Women, 2005). The United Nations (1999) reported Tajikistan to be the poorest of the Newly Independent States (NIS) countries. Sixty-four percent of the population lives below the poverty line (World Bank, 2006) with over two-thirds of the people living on less than \$2.15 a day.

Regardless of hardship, Tajikistan has the potential to profit from agriculture, specifically in the food and textile industries. With a mild winter climate, the country produces fruits and vegetables, cotton, silk, and wheat as major agricultural commodities. Government-owned collective farms under soviet rule have been transferred to private owners who sell produce in local markets. In addition to the agricultural sales, many women produce textile products in cottage-type industries to sell at local markets. In fact, the United Nations National Human Development Report (1999) states that women are increasingly participating in innovative income generating opportunities by taking economic initiative into their own hands and producing foodstuffs, carpets, and embroideries. Save The Children (2000) also reported that development of women's economic self-sufficiency has a positive effect on their children's education and nutrition/health status.

However, the United Nations Human Development report (2000) lists gender equality as a particular concern in Tajikistan. Consequently, advanced education for women is the major thrust of the Tajik presidential decree *On Advancement of Women in Tajikistan* (Falkingham, 2000).

The Khujand branch of the Technological University of Tajikistan (KbTUT), established in 1992, is comprised of seven departments: (1) Food Service and Technology, (2) Textiles, Clothing and Design, (3) Economics and Business, (4) Mathematics, (5) Computer Sciences, (6) Humanities, and (7) Agricultural Technologies. The main goal of KbTUT is to prepare highly qualified specialists to function in a market-based economy. KbTUT believes that its faculty and students can play a major role in advancing small-scale, market-based enterprise in Tajikistan.

The University of Nebraska-Lincoln is Nebraska's land-grant university with eight colleges: (1) Agricultural Sciences and Natural Resources, (2) Architecture, (3) Arts and Sciences, (4) Business Administration, (5) Engineering and Technology, (6) Fine and Performing Arts, (7) Education and Human Resources, and (8) Journalism and Mass Communications. UNL faculty engage in research and outreach education in Cooperative Extension; they believe that information learned in the field and laboratory should be distributed to Nebraska citizens as well as to the rest of the world.

Since 1996, Winrock International sponsored selected UNL faculty to provide training in business development, food science, and textiles to improve their knowledge and skills for a market-based economy. Daly (2002) shared her teaching experiences in textiles in Tajikistan and provided details associated with Winrock International assignments. However, additional small-scale entrepreneurial business education for food- and textile-related businesses is still crucial to help people, especially women, gain financial independence in Tajikistan because the lack of relevant entrepreneurial skills is one factor that limits women's ability to engage in developing new micro businesses (Falkingham, 2000).

Food safety is a basic requirement for food processing facilities in developing countries if they hope to export what they process. However, implementing basic food safety practices in a developing country is a challenge because of regulatory issues, politics, economic pressures, training needs, educational systems, cultural beliefs, and food production and technical issues (Stier, Ahmed, & Weinstein, 2002).

United Nations Reports (1999, 2000) recommend reforming educational systems to train people for a market-based economy. They suggest modernizing curricula at all educational levels and introducing up-to-date teaching methods by continuing exposure to new ideas through international exchange programs. The collaborative community based education program between KbtTUT and UNL is one example of implementing these recommendations. KbtTUT's faculty learned about food safety technologies and modern teaching methods and incorporated new curricula into their programs. And, they started to implement community education as an outreach function for a university.

### **Purpose and Objectives**

The purpose of the collaborative project between UNL and KbtTUT was (a) to introduce the extension/outreach education concept through the development of an entrepreneur center as one step toward developing a stable market-based economy as a function of an agricultural university and (b) develop a textile museum to help Tajiks, specifically women, reconnect to their cultural heritage and preserve their textiles (Albrecht & Prochaska-Cue, 2002, 2003). The objectives were to:

1. Develop an entrepreneurial center at KbtTUT that will provide outreach programs for community members on small-scale business development;
2. Arrange for KbtTUT faculty/upper level students/administrators to visit UNL to enhance subject matter expertise and experiential training in food science and textiles, clothing, and design;
3. Enhance curriculum in food science and textiles at KBTUT by incorporating successful techniques utilized in Nebraska small-scale entrepreneurial programs;
4. Train KbtTUT faculty to provide extension/outreach educational programs through the entrepreneurial center and textile museum.

(Albrecht & Prochaska-Cue, 2002, 2003)

The entire project was made possible by funding from three US State Department grants (Miller, 1999; Albrecht & Prochaska-Cue, 2002, 2003) and three Winrock International projects over a 10-year period.

## Methods

To develop extension/outreach education in Tajikistan, KbtTUT faculty and advanced level students attended UNL and participated in selected courses, workshops, field experiences, and work projects specific to food and textile entrepreneurship, the textile museum development, and curriculum enhancement. Training sessions on adult education were basic to helping them understand the extension education philosophy (Albrecht & Prochaska-Cue, 2002, 2003).

In Tajikistan workshops were conducted on small-scale fruit processing, fabric dyeing techniques, and business plan development. The workshops modeled extension/outreach programs for KbtTUT faculty to develop in their own entrepreneurial center and textile museum. Initially, UNL faculty conducted the entire workshop (Albrecht & Prochaska-Cue, 2002, 2003). However, as KbtTUT faculty developed new teaching skills at UNL, workshops were co-taught by KbtTUT and UNL faculty.

Upon completion of the 2002 and 2003 grants, an independent evaluation team visited KbtTUT to identify results of the collaborative relationship between UNL and KbtTUT. They followed a schedule developed by the project investigators and the KbtTUT Director to conduct personal interviews with 20 KbtTUT administrators, faculty, and students. They also visited four community projects and two KbtTUT classes, and interviewed the former KbtTUT rector who helped plan the 2002 grant.

IRB approved using open-ended interview questions based on the project objectives. As part of the data collection process, interviewees also showed what they did because of their involvement in the project. Responses were typed directly into a computer database and supplemented by photographs. Data were sorted, grouped into common topics, and summarized according to the project objectives. Data summaries were checked and verified by the co-evaluator for accuracy. A report (Rockwell & Rockwell, 2006) was submitted to the Project Director who supplied supportive background information.

## Results

The long-term goals for Tajikistan were to promote small-scale entrepreneurial business concepts, improve economic opportunities for women, and provide faculty and students with a greater understanding of the complex nature of developing a market-based economy.

### *Training Activities and Outcomes*

Sixteen KbtTUT faculty and students received intensive training at UNL to update their knowledge and skills related to their specific expertise to provide community outreach education for local Tajiks. They participated in educational programs and coursework to learn about curriculum development and delineate their role in the KbtTUT Entrepreneur Center or Textile Museum (Albrecht, 2006, 2005a, 2005b, 2005c, 2004a, 2004b, 2003, 2002; Prochaska-Cue & Albrecht, 2007).

#### *Food technology faculty.*

- Participated in UNL courses such as food microbiology, food preparation principles, analysis and properties of food, food composition, food safety and sanitation, food engineering, organization and administration of foodservice, and food production management.
- Had field experiences at the UNL Food Processing Center food microbiology laboratory, UNL Dairy Store, UNL Wheat Quality/Bread Laboratory, and University Food Services.

- Had shadowing experiences in ice cream production, with a government food inspector, and in a private bakery.
- Visited small-scale, entrepreneurial food-related businesses such as an apple juice processing plant, vineyard, chocolate candy factory, cookie company, specialty ice cream store, and jam and jelly processing plant. They went to the local farmers market to observe entrepreneurs selling their products.
- Attended workshops on food safety for foodservice, food drying, food preservation, and cake decorating. An additional workshop included market research, business development, brand development, sales distribution, and additional services.
- Conducted applied research about a food safety issue with a traditional Tajik food product which was used for a poster session at KbtTUT and their entrepreneur center.

*Textiles, clothing and design faculty.*

- Participated in UNL courses on visual literacy, apparel marketing, design essentials, apparel analysis, surface design on textiles, textile testing and evaluation, history of textiles, merchandising, weaving, care and conservation of textile collections, and a computer design program.
- Completed outreach programs on surface and structure, line as a journey, making objects from natural and artificial materials, shibori, and dyeing techniques with natural products.
- Worked in the Robert Hillestad Gallery with textile exhibitions and in the International Quilt Study Center to learn storage techniques of quilts, proper storage conditions, and development of an organizational system for collections; training which is invaluable as they develop the KbtTUT Textile Museum.
- Provided an educational and cultural experience for Nebraskans by developing two exhibits. The first was a Tajik textile artifacts exhibit in the UNL Textile, Clothing and Design Department at which they served Tajik food at the opening of their exhibit; the second was on the traditional Tajik fabric, Atlas—they described its history, production process, and items made with Atlas. By developing these exhibits, the Tajik faculty worked together so they can develop similar outreach programs for the KbtTUT Textile Museum.
- Visited local and regional small-scale textile and apparel entrepreneurial businesses on fabric-screening, laboratory systems, specialized fabrics, and sewing and alterations.
- Attended local quilt and sewing guild meetings.
- Visited museums to see different techniques for displaying museum collections, participated in a tour to major metropolitan area to see fabric stores and quilting centers where they learned about business startup and different sewing and quilting techniques.

*Business faculty.*

- Participated in UNL classes on leadership development for small groups and teams, finance, small business development and management, and restaurant and food service management.
- Met weekly with UNL faculty for individualized sessions on community needs assessment, personnel management, market research, and business plan development. Afterwards they visited local small businesses which illustrated application of the topics discussed.

- Participated in extension education programs delivered by UNL faculty on financial topics for adults and youth; they worked with financial businesses and communities agencies who demonstrated the community cooperation ideas.
- Conducted applied research on credit card used by UNL students and learn applied research skills to use in the KbtTUT Entrepreneur Center.

*Business and textiles faculty.*

- Worked at the local Ten Thousand Villages store where they learned about customer service, merchandise display, inventory control, product ordering, bookkeeping and record techniques, and processing of sales.

*KbtTUT administrators.*

- Developed strategic plans for the KbtTUT Entrepreneur Center and Textile Museum.
- Participated in education administration courses on community involvement and school/community communications and public relations.
- Shadowed UNL administrators and learned about American university operations including student registration and the credit hour system.

*All faculty.*

- Participated in a Small Scale Entrepreneur Workshop which covered entrepreneurial skills, time management, goal setting, community assessment, market research, business plan development, potential funding sources, advertising and marketing, bookkeeping and records, pricing, and financial business projections. KbtTUT faculty who were to lead the KbtTUT Entrepreneur Center and Textile Museum developed a business plan for their entities.
- Participated in cultural and diversity training and worked with the UNL Women's Studies program and the UNL Women's Center. One administrator attended the Women in Educational Leadership Conference.
- Prepared posters and displays for conferences which they now use at their university.
- Attended a weekly Education Outreach workshop to help them design outreach programs for their Entrepreneur Center and Textile Museum. Topics included defining an educational program, understanding the adult learner and learning styles, writing goals and objectives, organizing content, selecting teaching techniques and tools, developing a teaching plan, considering educational climate, and conducting educational evaluation.
- Developed two lesson plans with corresponding evaluation instruments to use upon returning to Tajikistan.
- Recorded their observations and experiences while at UNL. Through journaling, they explored the feasibility of developing a course syllabus and using different testing systems at KbtTUT.
- Participated in workshops and computer program training to enhance their teaching— Design for Learning, curriculum development, peer instruction, PowerPoint, Photoshop, Dreamweaver, and BlackBoard. In one of the training sessions, one person made a video of food microbiology techniques to use in University classes and outreach workshops.
- Attended a national professional meeting related to their discipline. They observed conference organizational techniques and educational delivery methods that could be

transferred to outreach programming through their Entrepreneur Center and Textile Museum.

Five UNL faculty went to Tajikistan to model outreach education. They conducted workshops on small-scale fruit processing, textile techniques, and business plan development for KbtTUT faculty, students, and the general public. They helped set up the KbtTUT Entrepreneur Center and Textile Museum in space dedicated by the University.

#### *Outcomes in Tajikistan*

KbtTUT faculty applied what they learned at UNL in various ways (Rockwell & Rockwell, 2006). Examples include but are not limited to:

- Entrepreneur Center faculty filed the appropriate documents with the Tajik government to have the Center officially recognized as a non-governmental organization (NGO).
- Entrepreneur Center faculty used lesson plans and evaluations they developed at UNL to design and conduct workshops for the public on making jam, fabric dyeing techniques with natural products, and sewing skills. Business faculty included a session on business plan development in each of the workshops.
- Textile Department faculty started collecting items for the museum and had public displays. Consequently, the Textile Museum helped student recruitment for the Department.
- In both the Foods and Textile Departments, faculty revised courses, or developed new ones, to focus on a market-based economy. New courses taught for the first time in Tajikistan were on food safety, color theory, and history of costume. Faculty redesigned courses—they developed a syllabus for the first time, used modern teaching methods, and changed their testing and evaluation processes. They also are developing outreach programs and using the new educational strategies in them.
- Faculty who trained at UNL shared what they learned with other KbtTUT faculty who did not participate in the exchange program.

Faculty trained at UNL not only increased their knowledge and improved their skills but the entire experience helped them create a vision of what “can be” for Tajikistan; they will continue to lead changes. The younger women who spent time at UNL developed more self-confidence, acquired a different perspective on women’s rights, and broadened their vision of what is possible for them as women and for their families.

Overall, KbtTUT faculty grasped the importance of developing a textile museum as a way to preserve part of their culture because several other similar types of museums currently exist in Tajikistan; they were able to operationalize the idea fairly easily. The concept of an entrepreneur center focusing on a market-based economy was a new idea and less concrete; it was a challenge for them.

### **Educational Importance, Implications, and Applications**

Bringing faculty and students from Tajikistan to the United States illustrated a democratic market-based society. Technological advances throughout the world have opened the door for KbtTUT administrators and faculty to build upon basic and applied research from other countries. The collaborative arrangement between UNL and KbtTUT gave KbtTUT administrators, faculty, and students a vision of what ‘can be’; they can see an ‘end vision’ for some changes that can impact the lifestyle of citizens in Tajikistan. However, they are challenged to identify the paths to reach their ‘end vision’ given the country’s economic situation and their desire to address basic educational needs within their university and community.

Because of the US State Department grants, Tajik faculty and students experienced extension/outreach educational opportunities while they were at UNL. The idea of Extension/outreach education as a university function was a new concept and presented challenges for the faculty. Therefore, it is recommended that:

1. KbtTUT faculty partner with non-governmental agencies (NGOs) from other developed countries which currently operate in Tajikistan to further develop the entrepreneur center.
2. KbtTUT should continue to encourage students to seek advanced degrees from developed countries and to focus their education on issues that face Tajikistan.
3. KbtTUT, and other educational institutions in Tajikistan, should recruit these students as faculty when they complete their advance degree so they can help Tajikistan realize their vision of a market-based economy.

Transferring new knowledge about food safety and adoption of food safety practices in developing countries is challenging. To help meet this challenge, this 10-year project in Tajikistan illustrated that:

- Faculty and students from developing countries need to be involved in a broad educational process including formal, on-campus classroom and a variety of extension/outreach programs and applied research projects that apply to their needs.
- Faculty from the US need to:
  - Model interactive teaching/learning techniques for the developing country’s university students and faculty while they are in the US.
  - Illustrate workshops using an extension/outreach model in the developing country.
  - Provide assistance in setting up education based on the best practices in their discipline.

The economic situation has improved in Tajikistan since their civil war and challenges still exist. Dana (1999) stated that lack of infrastructure and poor communication and transportation systems hinders entrepreneurship. Through this project, KbtTUT faculty and students have expanded their visions and are figuring out ways to move toward changing their visions to overcome these challenges as they apply what they learned at UNL to their society. These faculty and students want to continue to be leaders to realize their vision of what ‘can be’.

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