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# **Introducing Extension/Outreach Education in Tajikistan**

**Julie A. Albrecht**

Professor

University of Nebraska-Lincoln

Lincoln, Nebraska

[jalbrecht1@unl.edu](mailto:jalbrecht1@unl.edu)

**Kathleen Prochaska-Cue**

Associate Professor

University of Nebraska-Lincoln

Lincoln, Nebraska

[kprochaska-cue1@unl.edu](mailto:kprochaska-cue1@unl.edu)

**S. Kay Rockwell**

Professor Emeritus

University of Nebraska-Lincoln

Lincoln, Nebraska

[krockwell1@unl.edu](mailto:krockwell1@unl.edu)

**Pulat A. Pulatov**

Professor and Director

Research Institute of Labour and Social Protection of the Republic of Tajikistan

Dushanbe, Tajikistan

[pulatov@tojikiston.com](mailto:pulatov@tojikiston.com)

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**Abstract:** University of Nebraska-Lincoln (UNL) and Khujand branch of the Technological University of Tajikistan (KbTUT) collaborated on the development of an Extension/outreach program in Tajikistan. Fifteen KbTUT administrators, faculty, and students from textiles, food science, and management engaged in training sessions at UNL on entrepreneurship, adult education techniques, and up-to-date teaching methods. Extension philosophy was integrated into each individualized learning plan. Through the newly established KbTUT Entrepreneur Center and Textile Museum, UNL faculty introduced and illustrated a community outreach model. KbTUT faculty taught Extension/outreach workshops and used their new knowledge to revise or develop new university courses with up-to-date teaching methods.

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## **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 (United Nations, 1999 & 2000).

Tajikistan, a country created from the former Soviet Union in Central Asia, is slightly smaller in size than Wisconsin, with an estimated population of 6.5 million (World Bank, 2006). Tajikistan is landlocked; its terrain mountainous with approximately 70% of the land suitable for agricultural production. Subsidies withdrawn by Moscow in 1991 and the 1992-93 civil war destroyed much of the country's economic potential (United Nations, 2005). Tajikistan is the poorest of the 15 countries that made up the former Soviet Union (United Nations, 1999); 64% of the population lives below the poverty line, with over two-thirds of the people living on less than \$2.15 a day (World Bank, 2006).

Tajikistan has the potential to profit from agriculture, specifically food and textile industries (United Nations, 1999 & 2000). With a mild winter climate, major agricultural commodities are fruits, vegetables, cotton, silk, and wheat. Government-owned collective farms are being transferred to private owners who sell their produce in local markets. In addition, many women produce and sell foodstuffs and textile products at local markets.

Khujand branch of the Technological University of Tajikistan (KbTUT), established in 1992, has seven departments: Food Service and Technology; Textiles, Clothing, and Design (TCD); Economics and Business; Mathematics; Computer Sciences; Humanities; and Agricultural Technologies. KbTUT believes its faculty and students can play a major role in advancing small-scale, market-based enterprises in Tajikistan (Maksudov, 2007). As in all the former Soviet Union countries, Tajiks wanted to reconnect to their heritage, lost while they were a Soviet republic, as part of their university mission. In 1996, faculty and administrators from KbTUT came to Nebraska and visited the Food Processing Center (entrepreneurship) and Textile Museum in the Textile, Clothing and Design Department at the University of Nebraska-Lincoln (UNL). From this visit, the faculty and administrator developed the vision of entrepreneurial education and development of a museum to reconnect to their heritage at KbTUT.

Therefore, the Khujand branch of the Technological University of Tajikistan (KbTUT) and the University of Nebraska-Lincoln (UNL) collaborated to develop an entrepreneurial education center and a cultural textile museum for delivering community-based Extension/outreach education.

In Tajikistan, small-scale entrepreneurial business education for food- and textile-related businesses was crucial because Tajiks, especially women, lacked relevant entrepreneurial skills, a factor limiting their ability to develop new micro businesses and gain financial independence (Falkingham, 2000). Winrock International under their Farmer-to-Farmer program (Bates, 2006) funded short-term assignments to help Tajikistan move toward a market-based economy. These assignments led to a cooperative arrangement between the University of Nebraska-Lincoln and KbTUT, and to ensuing U.S. State Department grants (Albrecht & Prochaska-Cue, 2003, 2004a). The goal of these grants was to educate KbTUT faculty and students in outreach education, business development, food science, and textiles. The educational effort followed Daly's (2002) Winrock International teaching assignment in textiles. Strategies she learned helped UNL faculty design a curriculum to address the goals of the grants (Albrecht & Prochaska-Cue, 2004b).

Food safety is a basic requirement for food processing facilities in developing countries if they hope to export what they process. However, as Stier, Ahmed, and Weinstein (2002) noted, 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. These complex issues had to be considered in the project. The United Nations (UN) also recommended reforming educational systems to train people for a market-based economy. One specific suggestion was to modernize curricula at all educational levels with up-to-date teaching methods and illustrate them in international exchange programs (United Nations, 1999, 2000).

## Purpose and Objectives

This article describes and discusses the development of initial Extension/outreach education in an agricultural university in Tajikistan. Specific program objectives of the project described were to were to:

1. Develop an entrepreneurial center at KBTUT to provide outreach programs for community members on small-scale business development.
2. Arrange for KBTUT faculty/students/administrators to enhance subject matter expertise at UNL and obtain 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 KBTUT faculty to provide Extension/outreach educational programs through the Entrepreneurial Center and Textile Museum.

## Methods

Co-leaders, UNL faculty and KBTUT's director, outlined strategies to meet specific project objectives using a two-pronged educational approach. First, KBTUT administrators, faculty, and advanced level students visited UNL for extended periods (4 weeks to one semester). Individual curricula were designed for each person according to their discipline and included UNL courses, Extension workshops, field experiences, and work projects. Training sessions on adult education and up-to-date teaching methods were integrated to help them understand the Extension education philosophy.

Second, UNL faculty conducted workshops on small-scale fruit processing, fabric dyeing techniques, and business plan development in Tajikistan. These workshops modeled community outreach programs for KBTUT faculty. As they developed new teaching skills, the workshops were co-taught by KBTUT and UNL faculty. In Tajikistan, UNL faculty consulted on the start-up processes for the Entrepreneurial Center and Textile Museum and advised KBTUT faculty as they started to use the Center and the Museum for teaching purposes (Albrecht & Prochaska-Cue, 2004).

Upon completion of the project (5 months after completion of the educational programming), an independent evaluation team conducted an ex post facto evaluation at KBTUT (Diem, 2002; Rockwell & Rockwell, 2006). It focused on the practice level in Targeting Outcomes of Programs (Rockwell & Bennett, 2003) and documented what happened when KBTUT educators returned home and applied what they learned. The evaluators interviewed 20 KBTUT administrators, faculty, and students. They also visited four community projects and two KBTUT classes and interviewed the former KBTUT rector who helped initiate the project.

Institutional Review Board (IRB) for the use of human subjects (UNL) approved using open-ended interview questions based on the project objectives and digital photography. Interviewees presented samples of what they did as a result of their involvement in the project. Interview responses were recorded in a computer database and matched with the appropriate photographs. The principle investigator sorted the data, grouped the data into common topics, and summarized data according to the project objectives. Data summaries were checked and verified by the co-evaluator for accuracy.

## Results

Fifteen KbTUT faculty and students were selected for an intensive training program at UNL. Each completed an individualized curriculum plan and updated knowledge and skills in their specific discipline. Curriculum design and evaluation, up-to-date teaching methods, and management needs for an Entrepreneur Center or Textile Museum were included. Each person returned to Tajikistan with materials to begin a community outreach program.

The food science program, which included specific courses and field experiences, is detailed in Table 1. An applied research project on a food safety issue with a traditional Tajik food product was completed by a Tajik faculty member (Yarbaeva, Velugoti, Thippareddi, H., Albrecht, 2008).

**Table 1.**  
KbTUT Faculty and Students in the Food Science Educational Program

<b>Title/Role</b>	<b>Training Time at UNL</b>	<b>UNL Courses and Research Activities</b>	<b>Extension/ Outreach Activities</b>
Faculty	2 semesters	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. Conducted an applied research project on food safety issue with a traditional Tajik food product	Experiences at the UNL Food Processing Center food microbiology laboratory, UNL Dairy Store, UNL Wheat Quality/Bread Laboratory, and University Foodservices; Shadowing experiences in ice cream production, with a government food inspector, and in a private bakery. Visits to small-scale entrepreneurial food-related businesses. Workshops on food safety for foodservice, food drying, food preservation and food business entrepreneurship.
Faculty	1 semester		
Faculty	1 semester		
Faculty	1 semester		
Student	2 semesters		
Faculty	6 Weeks		
Student	8 weeks		

The textile program included specific courses and field experiences for each faculty, listed in Table 2.

**Table 2.**  
KbTUT Faculty in the Textiles Educational Program

<b>Title/Role</b>	<b>Training Time at UNL</b>	<b>UNL Courses and Creative Activities</b>	<b>Extension/ Outreach Activities</b>
Faculty	1 semester	Visual Literacy, Apparel Marketing, Design	Workshops on surface and structure, line as a journey,

Faculty	1 semester	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. Designed two educational Tajik cultural exhibits for Nebraskans.	making objects from natural and artificial materials, shibori, and dyeing techniques with natural products. Worked in the Robert Hillestad Gallery and in the International Quilt Study Center. Visits to small-scale textile and apparel entrepreneurial businesses
Faculty	1 semester + 6 weeks		Participation in local quilt and sewing guild meetings. Visits to textile related museums.
Faculty	1 semester		

The management program for faculty is listed in Table 3.

**Table 3.**  
KbTUT Faculty in the Management Educational Program

<b>Title/Role</b>	<b>Training Time at UNL</b>	<b>UNL Courses and Research Activities</b>	<b>Extension/ Outreach Activities</b>
Faculty	2 semesters	Leadership Development for Small Groups and Teams, Finance, Small Business Development and Management, and Restaurant and Foodservice Management. Conducted applied research on credit card used.	Weekly meetings individualized sessions were held on community needs assessment, personnel management, market research, and business plan development. Visits to local small businesses which illustrated how the topics were applied. Extension education programs on financial topics for adults and youth. Work with financial businesses and communities agencies who demonstrated the community cooperation ideas. Worked at the local Ten Thousand Villages store.
Faculty	1 semester		

The university administrator program is provided in Table 4.

**Table 4.**  
KbTUT Administrators in the Educational Program

<b>Title/Role</b>	<b>Training Time at UNL</b>	<b>UNL Courses and Research Activities</b>	<b>Extension/ Outreach Activities</b>
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Director	4 weeks	Community Involvement, School/Community Communications and Public Relations	Developing strategic plans for the KbtUT Entrepreneur Center and Textile Museum. Shadowed UNL administrators to learn about American university operations including student registration and the credit hour system. Attended the Women in Educational Leadership Conference
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All of the faculty who were in semester programs participated in an Extension education program (12-two hour sessions during a semester) that 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. Lesson plans with corresponding evaluation instruments were developed by KbtUT faculty to use upon returning to Tajikistan. KbtUT faculty were provided journals while at UNL to document their educational experiences and to explore potential changes at KbtUT. Journal entries were voluntarily shared with other KbtUT and UNL faculty in a weekly seminar. Based on their experiences in these educational programs, KbtUT faculty developed outreach programs using the new educational strategies that they subsequently delivered in Tajikistan.

Faculty attended national professional conferences appropriate to their subject matter. They observe conference organizational techniques and educational delivery methods that could be transferred to outreach programs at the KbtUT Entrepreneur Center and Textile Museum. KbtUT faculty designed and presented posters and displays at UNL conferences. These educational media are now displayed at KbtUT. Faculty learned various computer programs for use in Extension programs and teaching, and experienced computer-based instruction in adult education theory, curriculum development, and peer instruction.

KbtUT faculty and students while at UNL were involved with activities where they shared their culture with UNL students and faculty, and the greater Nebraska community. In courses, they were often asked to share their culture and ideas with their classmates and faculty. A Tajik textile exhibit was held in the TCD department, open to the Lincoln community, with a reception including Tajik food. Tajik faculty and students prepared poster sessions on their Tajik culture for College of Education and Human Sciences Student Research Conference and the Nebraska International Multicultural Exchange Conference.

Five UNL faculty went to Tajikistan to model a variety of teaching techniques in traditional classroom and outreach education settings. They conducted interactive participatory workshops on small-scale fruit processing, textile techniques, and business plan development for KbtUT faculty, students, and general public. They helped set up the KbtUT Entrepreneur Center and Textile Museum in space dedicated by the university. To gain insight into the Tajik business environment, UNL faculty visited various local entrepreneurial businesses related to food and textile production, local non-governmental organizations, and cultural sites related to museum development. Social interactions included family visits and home stays, which helped faculty gain a better understanding of the Tajik culture, including the importance of social

traditions and customs and how they affect the business environment (Mortenson & Relin, 2006).

UNL faculty who were involved with projects in Tajikistan learned about post-communist Muslim Tajik culture and life in an impoverished developing country. UNL faculty experienced first-hand the struggle to establish a democratic economy based society and for Tajiks to identify with their lost cultural heritage, which affected individuals, families and the larger society.

KbTUT faculty applied what they learned at UNL in various ways. 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 workshop. Textile Department faculty started collecting items for the museum and developed public displays. Consequently, the Textile Museum helped student recruitment for the department. In both departments, faculty revised courses or developed new ones to focus on a market-based economy. New courses taught for the first time in Tajikistan included food safety, color theory, and history of costume. Faculty redesigned courses incorporating a syllabus for the first time, used modern teaching methods, and changed their testing and evaluation processes. They developed outreach programs using the new educational strategies. Faculty who trained at UNL shared what they learned with other KbTUT faculty who did not participate in the exchange program.

One Tajik participant stated:

Now, we need to grow a small business rather than study about large factories. We need to improve small businesses. (We need to) change from how we focused under the Soviet system to smaller businesses, helping people grow their own business, make money and help the economy of the country (Rockwell & Rockwell, 2006).

As the KbTUT faculty, students and administrators were exposed to a democratic educational system, changes at KbTUT included the development of a credit-based university system, creating courses and curricula that provide an educational system with required courses for each major and elective courses for students to select. Course changes were made to provide more student involvement in the educational process, syllabi were developed based on course content and objectives, and educational instructional techniques were introduced that included use of audio-visual techniques and interactive non-lectured based techniques currently used in U.S. educational systems rather than the rote method used in Tajik schools. Their testing system was changed based on what the faculty and students experienced at UNL.

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 (Rockwell & Rockwell, 2006). They plan to continue to provide leadership for change. 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, KbTUT faculty grasped the importance of developing a textile museum as a way to preserve culture because similar museums currently exist in Tajikistan. The concept of an entrepreneur center focusing on a market-based economy was a new idea, less concrete, and more of a challenge for them.

## Conclusions

The collaborative, community-based Extension/outreach education program between KbTUT and UNL is one example of implementing the Stier, Ahmed, & Weinstein (2002) and the UN recommendations (1999, 2000). KbTUT faculty learned about food safety and textile technologies, business plan development, and

modern teaching methods to incorporate into their curricula and educational programs. And they started to implement community education as an outreach function for their university. To develop effective outreach programming, KbtUT will need to collaborate with other NGOs in Tajikistan (Rockwell & Bennett, 2004, Rockwell & Rockwell, 2006). Lessons learned about collaborations included the following.

1. University faculty from cooperating institutions can work together to build a continuous program to help an underdeveloped county.
2. Defining the vision in a collaborative effort is challenging and requires building trust between the institutions.
3. Monitoring the situation in the underdeveloped county is crucial to keep focused on the collaborative agreements laid out in a proposal.
4. Working with different leadership styles as the project progress is a challenge.
5. The process needs to continue in stages for project adjustment as new information emerges.

## **Implications and Recommendations**

Technological advances throughout the world have opened the door for KbtUT administrators and faculty to build upon basic and applied research from other countries. The collaborative arrangement between UNL and KbtUT helped KbtUT administrators, faculty, and students develop a vision of what "can be" for themselves and their country (Rockwell & Rockwell, 2006). Their vision includes adding the Extension/outreach function to their educational institution. However, many challenges remain to reach this desired vision given the country's economic situation and basic educational needs of the university and the community.

Transferring new knowledge, adoption of new practices, and entrepreneurial education in developing countries are challenging. To help meet this challenge, this project in Tajikistan illustrated the following.

1. Faculty and students from developing countries need to be involved in a broad educational process, including formal, on-campus classroom instruction, a variety of Extension/outreach programs, and research projects that apply knowledge and results to real situations.
2. Faculty from the U.S. need to model interactive teaching/learning techniques for the developing country's university students and faculty while they are in the U.S., conduct culturally sensitive workshops using an Extension/outreach model in the developing country, and provide assistance in setting up outreach education.

Because of the project described here, Tajik faculty and students experienced Extension/outreach educational opportunities while 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 KbtUT:

1. Partner with non-governmental agencies (NGOs) from other developed countries that currently operate in Tajikistan to further develop their Entrepreneur Center as a focus of community education.
2. Continue to encourage students to seek advanced degrees from developed countries, with the heart of that education focused on issues facing Tajikistan.
3. KbtUT, and other educational institutions in Tajikistan, should recruit these students as faculty when they complete advanced degrees to help Tajikistan realize its vision of developing a market-based economy.

While the economic situation in Tajikistan has improved since the civil war, challenges still exist. Lack of infrastructure, especially poor communication and transportation systems, hinder entrepreneurship (Dana, 1999). Through this project, the visions of KbtUT faculty and student for their educational institution and their country were expanded. As a result, strategies are being implemented to move toward the new vision of the KbtUT educators who continue to apply methods learned at UNL to improve their country's economic base. KbtUT faculty and students will continue as leaders to realize their visions of what "can be" for themselves, their families, their educational institution, and their country.

## References

- Albrecht, J. A., & Prochaska-Cue, M. K. (2003). Enhancing economic development educational programs for the small-scale entrepreneurial food and textile industries in Tajikistan. U. S. State Department Grant. 25-6336-0020-001 S-ECAAS-02-GR-248.
- Albrecht, J. A., & Prochaska-Cue, M. K. (2004a). Entrepreneurial center development for food and textile small-scale business in Tajikistan. U.S. State Department Grant. 25-6336-0020-001/002 S-ECAAS-03-GR-172 (DD).
- Albrecht, J. A., & Prochaska-Cue, M. K. (2004b). Value-added foods business planning. Winrock International project TAJ119 report.
- Bates, R. M. (2006). Jumpstart your international Extension experience with Farmer-to-Farmer. *Journal of Extension* [On-line], 44(6) Article 6IAW1. Available at: <http://www.joe.org/joe/2006december/iw1.php>
- Daly, M. C. (2002). Teaching, consulting, and conducting research across cultures: An international opportunity in Tajikistan [Electronic version]. *Clothing and Textiles Research Journal*, 20, 262. Retrieved October 30, 2007 from: <http://ctr.sagepub.com/cgi/content/abstract/20/4/264>
- Dana, L. R. (1999). Tajik-American Pepsi. *British Food Journal*, 101 (5/6), 461-467.
- Diem, K. G. (2002). Using research methods to evaluate your Extension program Article 6FEA1. *Journal of Extension* [on-line], 40(6). Available at: <http://www.joe.org/joe/2002december/a1.php>
- Falkingham, J. (2000). Country briefing paper: Women and gender relations in Tajikistan. Retrieved September 17, 2007 from: <http://www.untj.org/files/reports/Women%20and%20Gender%20Relations%20in%20Tajikistan.pdf>

Mortenson, G., & Relin, D. O. (2006). *Three cups of tea: One man's mission to promote peace . . . One school at a time*. New York: Viking Press.

Maksudov, A. (2007). Technological University of Tajikistan â KbtUT. Written Report (Personal Communication).

Rockwell, S. K., & Bennett, C. (2003). Targeting outcomes of programs (TOP). Retrieved October 5, 2004 from: <http://citnews.unl.edu/TOP/index.html>

Rockwell, S. K., & Rockwell, L. V. (2006). Outcomes at Khujand Branch of the Technological University of Tajikistan. Evaluation report prepared for US State Department Grant, 25-6336-0020-001/002 S-ECAA-03-GR-172 (DD) and 25-636-0020-001 S-ECAAS-02-GR-248. Retrieved January 20, 2010 from <http://digitalcommons.unl.edu/aglecfacpub/50/>

Stier, R. F., Ahmed, M. S., & Weinstein, H. (2002). Beyond HACCP constraints to HACCP implementation in developing countries. *Food Safety Magazine*, 8, 36-39.

The United Nation Development Fund for Women (2005). The impact of the conflict on women in Tajikistan: Economic security and rights. Retrieved April 25, 2007 from: <http://www.womenwarpeace.org/tajikistan/tajikistan.htm>.

United Nations. (1999). Tajikistan human development report. Retrieved June 18, 2009 from: <http://hdr.undp.org/en/reports/nationalreports/europethecis/tajikistan/name.2929.en.html>

United Nations. (2000). Tajikistan human development report. Retrieved June 18, 2009 from: [http://hdr.undp.org/en/reports/nationalreports/europethecis/tajikistan/tajikistan\\_2000\\_en.pdf](http://hdr.undp.org/en/reports/nationalreports/europethecis/tajikistan/tajikistan_2000_en.pdf)

Yarbaeva, S. N., Velugoti, P. R., Thippareddi, H., & Albrecht, J. A. (2008). Evaluation of the microbial quality of Tajik sambusa and control of clostridium perfringens germination and outgrowth by buffered sodium citrate and potassium lactate. *J. of Food Prot.* 71,77-82.

World Bank (WB) (2006). Tajikistan country brief 2006: Overview. Retrieved April 25, 2007 from: <http://www.worldbank.org/>

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