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The *Journal of International Agricultural and Extension Education* is the official peer-reviewed, refereed publication of the Association for International Agricultural and Extension Education. The purpose of the *Journal* is to enhance the research and knowledge base of agricultural and extension education from an international perspective.

Articles intended for publication should focus on international agricultural education and/or international extension education. Articles should relate to current or emerging issues, cite appropriate literature, and draw out implications for international agricultural and extension education. **Manuscripts, or portions of manuscripts, must not have been published or be under consideration for publication by another journal.**

Three types of articles are solicited for the *Journal*: Feature Articles; Commentary Articles; Tools of the Profession Articles.

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Feature articles focus on philosophy, current or emerging issues, and the methodology and practical application of specific research and appropriate technologies, which have implications for developed and developing countries. For publication in the *Journal*, feature articles must pass the *Journal's double blind, peer-review process*, which utilizes peer reviewers who evaluate manuscript content and ensure readability. Reviewers are selected usually from the membership of the AIAEE. In the double-blind, peer-review process, all reference to author(s) is removed before the manuscript is sent to reviewers. Feature Articles may be submitted for peer-review a total of three times before they are no longer acceptable for publication in the *Journal*.

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From the Editor

Greeting to all members of the Association for International Agricultural and Extension Education (AIAEE) and to all readers of the *Journal of International Agricultural and Extension Education (JIAEE)*! The *JIAEE* summer issue brings many contributions from the 21st Annual AIAEE Conference, held in sunny San Antonio, Texas during the last week of May. I extend my sincere congratulations to the organizers of our annual conference. On behalf of the AIAEE, we say “thank you” to James R. Lindner, the AIAEE leadership team, and their many helpful assistants for planning, coordinating, and sponsoring a wonderful conference in San Antonio. I am hopeful all conference attendees enjoyed visiting Texas.

You may have noticed a slight change on the cover of this issue. True to the *JIAEE* editorial board promise made one year ago, we no longer publish the outstanding professional papers from our annual conference. Why not, you may ask? Well, as our profession has aged, so too has the number of manuscripts submitted for peer review to this journal. The *JIAEE* summer issue, traditionally confined to the contents of our most recent AIAEE conference, was a valued conduit for publishing manuscripts that otherwise would not have been shared in another medium. However, those were the days before high-speed Internet, auto-play compact discs, and far-reaching electronic mail listserv. Today, if you desire conference information, you need only access the Web site, <http://www.aiaee.org/conferences.html>, for a complete listing of all conference materials from the past five years. But, not all conference material was excluded from this issue. Take a few moments to read David Acker’s inspirational Keynote Address (p. 5), and review the conference professional paper abstracts (p. 57-85) before finding them on the Web.

Beyond the reasons for not publishing the outstanding conference papers described in the previous paragraph, the *JIAEE* must continue its goal of improving scholarship published in each issue. That is not to say that annual AIAEE conference papers are not worthy of being published in this journal, quite the contrary situation exists. However, all conference paper **authors are encouraged to re-write conference papers** and submit them to the *JIAEE* for peer review and possible publication. This journal offers all authors an opportunity to **expand articles** (Feature Article manuscripts may now be up to **20 double-spaced pages in length**). AIAEE conference papers are limited to 12 double-spaced pages. The extra pages allowed by the *JIAEE* may be used for in-depth narratives of manuscript frameworks (theoretical, conceptual, or operational), fuller descriptions of the research methods used, comprehensive data analyses, or enhanced explanations in the sections for conclusions, implications, and recommendations. All other sections, including the abstract, tables, and references must be included in the 20-page limit. If you did not have your paper selected as one of the research conference papers in San Antonio, I encourage you to re-write and submit it for review and possible publication in a future issue of the *JIAEE*.

Thank you to all *JIAEE* contributors, reviewers, and board members for assisting in the production of this issue. Enjoy your summer issue and continue doing what you can to promote greater understanding of agricultural and extension education worldwide.

Sincerely,



Gary J. Wingenbach, Editor

Journal of International Agricultural and Extension Education

Leadership through Service: All the Easy Jobs Have Been Taken

Keynote address presented by

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Presented to the 21st Annual Meeting of the
Association for International Agricultural and Extension Education
San Antonio, Texas
May 25, 2005

I am honored to have the opportunity to speak with you this afternoon. I have chosen the title of Leadership Through Service for my presentation. And I have added the sub-title: All the easy jobs have been taken... a phrase that I wish I had thought of myself. Actually, I read it on somebody's t-shirt while I was drafting my remarks.

My goal is not to present a retrospective review of our accomplishments, as tempting as that may be. Rather, I want to talk about some of the challenges I see on the horizon. I want to suggest some actions we can pursue. And, as is expected with this group, my frame of reference is global.

Since I assumed responsibility for academic programs in our college I have been invited to quite a few club and departmental banquets (the so-called rubber chicken circuit) and have given quite a few after dinner speeches. These speeches are really very simple to give. They have three requirements: a good beginning, a good ending, and the ability to bring these two elements as close together as possible. But a keynote address such as this one is a bit more demanding. I've organized my talk around four questions:

1. What kind of world do we live in?
2. What is our grand challenge?
3. What kinds of leaders are needed for our grand challenge?
4. What can agricultural and extension educators do now?

What kind of world do we live in?

Since we are in the US, we'll start with the American scene. In America today, we have red states and a few blue states. We have differing views on key issues. Some say that we are fighting a war on terrorism. Others believe that we are fighting a self-serving, short-sighted war for petroleum. And, according to Larry Summers (2005), President, Harvard University, "The evidence is overwhelming that inequality in our nation is increasing."

Globally, a confluence of factors creates (as former UNICEF director Carol Ballamy called it) a perfect storm of human deprivation. Factors include poverty, drought, HIV/AIDS, malaria, schistosomiasis, and others. John Hennessy (2005), President of Stanford University described our world as one in which:

...countries grapple with crises and conflicts of an increasingly complex and international nature – from disease and environmental deterioration to threats against global peace and prosperity.

In a new book, *The End of Poverty*, Jeffrey Sachs (2005) describes the magnitude of the problem as well as some very concrete solutions. His prescriptions are both bold and controversial. He points out that 20,000 people die every day due to extreme poverty. He reminds us that we "talk" far more than we "do" in development assistance.

In the face of this maelstrom the world community has so far displayed a fair bit of hand-wringing and even some high-minded rhetoric, but precious little action.

We live in a world of rich and poor. We live in a world where injustice, misery and poverty lead to frustration and instability. The link between poverty and instability is not just based on my speculation; the Central Intelligence Agency (CIA) agrees that they are critical determinants of state failure. The CIA

reported a very high correlation between stability of governments and human well-being in terms of health, hunger, and economic prosperity (CIA, 1999).

We know that civil and other military conflicts derail development. If you doubt this, look at poverty levels in Afghanistan, Sudan, Rwanda, Ethiopia and Sierra Leone. And conflict is expensive. The world community spends approximately \$1 trillion per year on defense spending.

Although it seems to be temporarily out of fashion in some powerful countries, there is a school of thought that individual nations can do well (for themselves) by doing good for others. Formerly, this was a more common cornerstone of successful foreign policy. This school of thought calls for investments in development in order to prevent conflicts from arising. "Preventive" development involves investments in education, economic development, and food security which are viewed as essential ingredients if instability is to be avoided. The logic lies in the assertion that such investments are cheaper than war.

But the challenges in development grow every year. My family and I moved to East Africa 25 years ago where I worked on a farmer training and extension project. At that time, average life expectancy in East Africa was about 48 years and we focused on training adult farmers. Next month I will be returning to East Africa to launch another farmer training project. In the intervening years average life expectancy in East Africa has dropped to approximately 42 years. The project we are launching will be a primary school based training project and the farmers who will be trained are children. The project isn't training future farmers; because of HIV/AIDS these children are considered beginning farmers.

What is our grand challenge?

Grand challenges have been issued from time to time throughout history by monarchs, geographical societies, and governments. Finding out if the world is flat

was a grand challenge. Putting a human on the moon was a grand challenge. Finding a cure for cancer, unfortunately, is still a grand challenge.

Do AIAEE members have a grand challenge? I believe we have a good set of candidates for our grand challenge. If you weren't totally preoccupied with Y2K computer worries, you'll remember the historic Millennium Summit held in New York in September 2000.

As you know, the Summit adopted eight Millennium Development Goals. The first is a goal to eradicate extreme poverty and hunger to respond to people who live under these conditions. According to the UN (2004), "1.2 billion people still live on less than \$1 a day and 880 million are malnourished."

Goal 2 relates to one of the most fundamental building blocks of development: primary education. According to the UN (2004), "113 million children do not attend school." We know that investments in this area have huge payoffs in terms of economic development, smaller family size, and related dimensions.

Goal 3 deals with empowerment of women. According to the UN (2004) approximately "two-thirds of the world's illiterates are women, and 80% of its refugees are women and children." At the risk of oversimplification, the prevailing world view seems to be that men currently hold the majority of the power in the world and women hold the majority of the common sense. We need to find ways to fully unleash the critical contributions of women in development.

Goal 4 is aimed at improving child survival, a very compelling goal. According to the UN (2004) 11 million young children die every year.

Goal 5 is targeted at reducing maternal mortality. "In the developing world, the risk of dying in child-birth is one in 48" (UN, 2004).

Goal 6 targets the control of two truly debilitating diseases—HIV/AIDS and

malaria—as well as others. As the UN (2004) states, "killer diseases have erased a generation of development gains."

Goal 7 challenges us to pursue goals one through six in an environmentally sustainable fashion. The UN (2004) points out that "more than one billion people still lack access to safe drinking water."

Goal 8 was established because donors realized that they are part of the problem. Debt loads place a tremendous burden on poor countries. Countries that are mortgaged to the hilt simply cannot prosper.

How much will it cost? According to the World Bank (2005), we will need to double development aid to the level of \$60 billion per year to achieve the Millennium Development Goals. This seems easily affordable. It is an amount equivalent to what the USA currently spends in Iraq in 12 months. Or, as Jeffrey Sachs (2005) points out, it's the cost of a weekly cup of coffee for every American.

But let's face it, AIAEE members can't tackle all of these problems. But we can have a significant impact on several of the Millennium Development Goals. Let's focus on the first three goals where we have a comparative advantage for our grand challenge.

Goal 1: By 2015, eradicate extreme poverty and hunger. Specifically, Target two calls for a halving of the proportion of people who suffer from hunger. Are we on track to achieve this goal? Can it be done in a decade? According to FAO Director General Jaques Diouf (2002), the short answer is: no. At the current pace we will not reach Target 2 until 2050 or 2060. Significant progress in India and China masks negative food production trends in Africa. But this is an area that is clearly in our sphere of interest.

Goal 2: By 2015, achieve universal primary education. Target three calls for children everywhere, boys and girls alike, to be able to complete a full course of primary schooling. This is doable. Tanzania, for example, eliminated school fees and

enrollment shot up from 60 to 90%. And closer to our area of interest, FAO and UNESCO are leading a global initiative called Education for Rural People and they would welcome our participation (FAO, 2003).

Goal 3: Promote gender equality and empower women. Target four directs us to “eliminate gender disparity in primary and secondary education...no later than 2015” (UN, 2004). AIAEE has a rich tradition of valuing and promoting scholarship related to gender and development. Our knowledge base can contribute to this area.

If we accept these as elements of our grand challenge then we must ask: Who will lead? And what strategies will be used?

What kinds of leaders are needed for our grand challenge?

There are many styles of leadership and a wide variety of leaders. Which variety do we need for our grand challenge? AIAEE member Bruce Lansdale (2000) in his book, *Cultivating Inspired Leaders*, tells us that the needs of development work are best served by what he calls the “inspiring leader-manager.” Leaders in this category are meant to exceed the leadership qualities commonly found in traditional managers and administrators.

James Autry (2001) makes a compelling case for servant leaders who serve with a generosity of spirit and selflessness to advance the goals of the organization. A service mentality prevails in this paradigm. In his book, *The Servant Leader*, Autry says that:

True leadership, unlike management, is not just a set of skills and learned behaviors. What you do as a leader will depend on who you are.

These days it is difficult to know what exactly is meant by service. The word is used in so many different ways: service call, service station, service learning, military service, church service, community service. For some in the US, the term

community service now implies a punishment...something you do when you have been bad rather than something you do because you are good!

I much prefer Justice O’Connor’s notion of public service. She describes it as “the task of building bridges for others” (O’Connor, 2004).

What kinds of leaders are needed for our grand challenge? As I prepared this talk I read several books and spent some time reflecting on leadership and service. All of the leaders I found myself admiring had a common leadership characteristic: they were quiet leaders who earned the respect of the world through significant service.

Examples of five quiet leaders who are world renowned will help me illustrate the point. On this list are three PhDs, one MD, one saint, and four Nobel peace prize recipients.

My first example, Mother Teresa, is a perfect role model for quiet leaders. Her story is well known. She went to India at age 19. Imagine what a special person it took to go to India in 1929 to spend the rest of her life trying to ease the burden of the poorest of the poor. She was awarded the Nobel Peace Prize in 1979.

My second example, Dr. Albert Schweitzer, is the first missionary I ever heard about. His contributions were enormous...but he viewed them as just some “small and obscure deeds.”

My third example is Dr. George Washington Carver who dedicated his entire life to serving human kind through science. He said:

It is not the style of clothes one wears, neither the kind of automobile one drives, nor the amount of money one has in the bank, that counts. These mean nothing. It is simply service that measures success.

We are proud that Dr. Carver is an Iowa State University graduate and a former faculty member.

My fourth example is Professor Wangari Maathai who believed passionately in women’s rights and the environment and was able to link the two through her Greenbelt Movement. She is an academic who found that serving the poor was compatible with a distinguished academic career.

My last example is Dr. Norman Borlaug, who attended school in a one room Iowa school house. He focused his creativity and very hard work on developing and distributing High Yielding Varieties of wheat. He is still going strong even in his 90s as a passionate crusader for ending hunger.

I hope you see the pattern in these well-known leaders that caught my attention. These are people who actively sought the toughest jobs. And they are individuals who never sought publicity for themselves.

We have many such quiet leaders and heroes in our profession who became leaders through their service. Some of these members are far enough along in their careers to have been recognized. In total, AIAEE has recognized 14 members for Outstanding Service:

William Rivera	Francis Byrnes
Jack Elliot	David Giltrow
Steve Jones	Janet Henderson
Gustav Duvel	Thomas Trail
James Christiansen	Donald Meaders
John Richardson	David Youmans
Bruce Lansdale	Robert Maxwell

So choosing a couple of members on which to focus my remarks was no easy task. But I decided to focus on two individuals that can’t be with us today: Bruce M. Lansdale and Robert H. Maxwell.

Bruce Lansdale is considered one of the senior statesmen of our profession. He has had an extraordinary career in agricultural education and rural development. He directed the American Farm School, Thessaloniki, Greece, from 1955-90. The American Farm School offers

programs at the secondary, post secondary and adult levels serving learners in Greece and the Balkans. In 2004, the American Farm School celebrated its 100th anniversary.

Bruce was raised in Greece. After finishing graduate work at Cornell, he returned to Greece as a Fulbright Scholar in 1948. When Bruce started his work in Greece in 1948, Greece was struggling to emerge from a dark period that began with WWII and continued non-stop through the Greek Civil War. In post war Greece Bruce found poverty, hatred, mistrust, individualism, and isolationism.

During Bruce’s tenure the school was a leader in educational innovation, introducing co-educational programs, short courses for farmers, and leadership of community development programs. The school was also a leader in technical innovation, introducing the first milking machine, the first combine harvester, and the first fully computerized agricultural school in Greece. Bruce is also the author of several books, all of which have been extremely well received worldwide, with several having been translated into other languages.

I first volunteered at the School when I was 19 and was truly inspired by Bruce, his wife Tad, and their family. I liked the school so much I asked Bruce if I could come back and work there someday. His response: “Well, you have to know something about agriculture and that pretty much rules you out!” I immediately went back to college, changed majors and finished a degree in agriculture. Of course, I called him up just before I graduated and begged him to hire me now that I was “educated.” I went back to work at the school for three years and watched as Bruce led the school to international fame through innovative educational programs, the hosting of dignitaries, speaking engagements around the world, and through the books he wrote.

In “retirement” Bruce and Tad Lansdale have not slowed down. They took

their message on the road to share their experience. They have worked in Albania and the Balkans, Nepal and other Asian countries, Nigeria, Tanzania, Honduras, and many other countries. Bruce and Tad joined us at many AIAEE meetings.

Two weeks ago, fellow AIAEE member John Crunkilton and I were in Greece for the launching of the Greek translation of Bruce's book, *Cultivating Inspired Leaders*. While there we learned of the establishment of a new award named in his honor, funded by friends and alumni of the American Farm School.

As many of you know, Bruce loved to share stories of Hodja, also known by many different names throughout the world: Mulla Nasredin, Goha, Joha, Nasredin Hodja, Hoja, Hoca. Bruce sent this one to share with participants in the AIAEE conference:

Hodja was once seen in the village seated backwards on his donkey. When asked what was going on, Hodja said: "My friend here wanted to go one way and I wanted to go the other.....so we are compromising!" (Lansdale, 1986, pg. 80)

Bruce provided a lifetime of service and a lifetime of leadership for others.

Robert Maxwell is the other quiet leader I wanted to spotlight. Robert H. Maxwell was so capable that he was asked to take on more and more leadership responsibility. Throughout his career he held many titles: Volunteer, Professor, Department Chair, Director of International Programs, Director of Extension, Dean of Agriculture, Associate Provost. But everyone new him as Bob; lovable, approachable, and hilariously funny, Bob.

Bob was raised on a farm in Iowa. He earned three degrees from two top institutions: Iowa State University and Cornell University. He could have pursued any number of distinguished academic career paths. But Bob took the road less

traveled. He began his career in Africa in 1960 when he, his wife Betty, and their children moved to Kenya. This was before the time of business class travel, before the time of air-conditioned Landrovers, and before the advent of frequent flier programs.

Bob applied the love and passion he felt for his own family to the challenges experienced by children and families in East Africa. And Bob was West Virginia University (WVU) in East Africa. And WVU was as well known in Dar es Salaam as it was in the West Virginia towns of Huntington or Parkersburg.

Bob was one of our AIAEE pioneers and he served AIAEE with distinction. Bob helped to launch AIAEE and was an active member throughout his career. He was elected by his peers and served as AIAEE president in 1995.

I had the privilege of working for Bob in Tanzania for four years. He set an example for the US and Tanzanian project staff in the respect he showed to everyone from the Minister of Agriculture to farmers and everyone in between.

Bob died in Africa doing what he loved: helping to improve the livelihoods of the poorest of the poor.

When I remember Bob, I remember him as someone who could make anyone laugh no matter what culture they represented, no matter how miserable they might feel. Sometimes it was his colorful vocabulary in Swahili. Sometimes it was a hilarious personal story. But Bob inspired far more than laughter. Recognizing the power of his inspirational character, Iowa State University established the R.H. Maxwell International Service Learning Scholarship in his honor to encourage undergraduate students to carry on Bob's tradition of service in developing countries. West Virginia University established a very similar fund called the R.H. Maxwell Fund for International Development in Agriculture. This fund provides seed grants for people and programs in support of international development in agriculture.

Bob Maxwell and Bruce Lansdale both provided extraordinary leadership through service. And they couldn't have cared less that all the easy jobs had been taken; they really weren't looking for them anyway.

What can agricultural and extension educators do now?

The short answer is: "PLENTY!"

Is there a role for AIAEE members in helping to improve food security, primary education and empowerment of women? I believe we can contribute critical ingredients to this quest. If the CIA is correct, advances in these three areas are linked to sociopolitical stability. We can contribute in the area of human resource development as a key foundation to improvements in these challenging areas. Both individuals and institutions can play a role.

Ernest Boyer (1990) called for a renewed commitment to service by universities. The bottom line is that society can ill afford to invest in universities without some return in the form of service to society.

At no time in our history has the need been greater for connecting the work of the academy to the social and environmental challenges beyond the campus. It seems clear that while research is crucial, we need a renewed commitment to service, too.

So, if you wanted to renew your commitment to service in order to change the world, where would you start? What specifically would you do when you wake up tomorrow? You might decide to start at the highest levels such as the World Bank. Unfortunately, at this level, the issues tend to be macro-policy issues that can appear only tangentially related to the realities of rural development.

I believe change begins at a more personal level. Change begins with a change in mindset as Norman Cousins so nicely

articulated: "Progress begins with the belief that what is necessary is possible."

Change also begins with a personal commitment as Jeffrey Sachs states:

It all comes back to us. Individuals, working in unison, form and shape societies...Great social forces are the mere accumulation of individual actions. Let the future say of our generation that we sent forth mighty currents of hope, and that we worked together to heal the world.

If you need some inspiration, consider our AIAEE role models. What would Bruce Lansdale and Bob Maxwell do if they could start again?

And if we are hesitant we should review two questions presented by Badaracco (2002) in his book entitled *Leading Quietly*:

Did Mother Teresa tote up the costs, benefits, and probabilities before she left a comfortable convent for the streets of Calcutta?

Did Nelson Mandela calculate the odds of bringing down Apartheid?

They both looked beyond what could be done to find what ought to be done.

Let me share with you my top ten list of things we can (and perhaps should) do starting right now.

10: Work on the tough problems:

I am personally guilty of conducting a study or two that measured what could be counted as opposed to what really counted. The tough problems are seldom solved by a single discipline. We should focus our research on the really difficult problems of development. Inevitably, this will bring us into research collaboration with other disciplines such as health, child development, management, and engineering. Of course, things get messy when we work interdisciplinarily...so let's figure out how to do it better.

9: Partnerships:

Pick a partner institution abroad and focus all of your efforts in cultivating that relationship. Focus resources and grant writing on that partnership and you will get results. We are trying that with Uganda. In the past 18 months we have attracted funding for five projects involving over 10 faculty, grad students and undergrads. Long-term partnerships yield results not available to shorter term unions.

8: Embrace change:

Education is relatively change proof. Let's not get stuck in the past. We need to make change a part of our institutional culture. Richard Bawden says that we have to learn our way forward. And we should never stop changing, because, as Benjamin Franklin said: "when we are finished changing, we're finished."

7: Harness technology to learning:

Yesterday, the *transistor* revolutionized mass communication. Today, *microprocessors* in handheld devices are now commonplace throughout the world. Tomorrow, *nanotechnology* of some form will revolutionize our learning processes. Imagine sub-microscopic components that are so small that 60,000 could fit in the space occupied by an eraser on top of a pencil. With the rate of technological change we are going to have to adapt much more quickly in order to take advantage of learning enhancements that will arise from technological change.

6: Brain swap:

We need greater cross fertilization of ideas and better understanding of and tolerance for differences between humans and cultures. Sabbaticals and student exchanges can help. We can provide incentives for industrialized country faculty to spend sabbaticals in developing countries and vice versa.

5: Food grant universities:

Building on the land-grant university concept, Stanley Johnson suggested that we establish *food-grant universities* in developing countries utilizing the proceeds of food aid sales. Food grant universities can be established in developing countries to focus sharply on food security problems. They could easily be funded through mechanisms such as the proceeds of food aid sales.

4: At a distance:

Establish distance education programs between developed and developing countries using the proceeds of a 1 cent tax on each e-mail we send. Would you mind paying a penny for every email you send? Why couldn't the proceeds of such an arrangement be used to fund an innovative development project. This is an idea that has been around for a while but seems to have stalled out.

3: Get political:

Are we interested in becoming more involved politically? Do we have a position on key issues? Do we communicate these positions? AIAEE should develop an advocacy arm and develop and communicate it's agreed upon positions to governments and NGO leaders worldwide.

2: Invest in grad students:

Universities in industrialized countries should set aside at least one additional graduate assistantships for promising leaders from developing countries. I can't think of a better investment than in the academic promise of tomorrow.

1: Invest in student leadership:

Students are the embodiment of hope. We should never underestimate the ability of students to develop and lead their own significant development activities. They are activists who develop leadership skills through service. I've listed just three

examples of student-led efforts that have made a difference:

- Engineers for a Sustainable World
- Students adopting a village in Guatemala
- Students against Hunger and for Ending Famine

In the words of Gunter Pauli we should be “Super Ambitious!” (Sustainable Development Issues Network, 2005). I honestly believe we could implement many of these with some extra effort and a modest amount of additional money.

Well, now that we’ve solved the most pressing problems confronting our planet let me offer another story from Bruce. This one is called “It’s in your hands”

Two small boys decided to play a trick on Hodja. With a tiny bird cupped in their hands they would ask him whether it was alive or dead. If Hodja said it was alive, they would crush the bird to show he was wrong. If he said it was dead they would let it fly away and still fool him. When they found the wise old man they said: “Hodja, that which we are holding, is it alive or dead?” Hodja thought for a moment and then replied: “Ah, my young friends, that is in your hands.” (Lansdale, 2000, pg 48)

Our grand challenge is in our hands. I know that seems like a pretty heavy responsibility. But let me offer a couple of words of encouragement as well as a word of caution.

One of my favorite Lansdale quotes: “There is no limit to what you can accomplish if you don’t care who gets the credit” (Lansdale, 2000, pg. 144).

Anthropologist Margaret Mead captured my imagination when she came to speak at my high school. And I have always been inspired by one of her most famous quotes:

Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has.

The quotes from Lansdale and Meade are particularly inspiring. But let me insert a cautionary note. The constant flow of media stories about human misery makes it almost impossible to avoid apathy as a psychological survival mechanism. Over time, I have found myself becoming desensitized by the constant barrage of news about the problems of the world. Let me illustrate my point by using a well known story of the boiled frog. I will call these frogs Kostas and Kristina. Throw Kostas into boiling water and he will immediately feel extreme heat. He will realize it’s a crisis and will take drastic action. Kostas will jump out of the hot water to save his life. Put Kristina into cool water and slowly raise the temperature. Kristina will never notice the gradual rise in temperature. She won’t realize there is a crisis...until it’s too late.

When we are shocked, we react quickly. When the devastating tsunami hit on December 26, 2004, the world community reacted immediately and generously. When the horror of the event became evident the world community immediately rallied and sent aid and technical assistance. But hunger and poverty are with us everyday. Year after year we get reports on the growing number of hungry people living in poverty. Sadly, when our sensitivities are eroded over time we can begin to accept almost anything. We must be vigilant so that we don’t end up like Kristina.

OK, let’s wrap up with one last Hodja story from Bruce. This one is called: “Darkness.”

One day Hodja was sitting in front of his hut searching in the dust when a neighbor came by and asked him what he was looking for. When Hodja told him he had lost his gold coin, the neighbor kneeled down and started sifting through the dirt. After a while, the neighbor asked Hodja exactly where he had lost the coin. Hodja told him that it had disappeared inside his hut. The neighbor asked: “Then why are you

searching for it outside?” Hodja replied: “It is much too dark in the hut to look for it inside.” (Lansdale, 1986, pg. 4)

Will we have the wisdom to look for solutions to our grand challenge in the right places? Will we ask and answer the important research questions? Will we confront or avoid the “darkness” of difficult tasks?

AIAEE has 21 years of experience and a rich tradition of service. We can use these assets to make significant progress on our grand challenge. All the easy jobs have been taken but we can draw strength from the examples of Bruce and Bob and provide leadership through service. Bruce and Bob would be proud to see the number of you who are demonstrating leadership through service.

Thank you to all of you who put agricultural and extension education to work in service of humankind. Keep up the good work. We have a lot to do.

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Issues and Procedures in Forging International University Partnerships

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Abstract

Partnerships between U.S. universities and institutions in other countries have often been problematic. Some universities think they have achieved partnership when they agree to cooperate on a project or even a proposal. Others feel they have a partnership when they sign a memorandum of understanding. The nature of any particular partnership, however, is often understood differently by the two (or more) institutions involved in the partnership. This difference in understanding often leads to miscommunication, frustration and strained relationships between the institutions and their representatives. The purpose of this article is to explore issues related to developing university partnerships across national boundaries. The two co-authors approach these issues from different points of view and from different experiences. Pooling those different perspectives, they draw conclusions about forming successful partnerships.

Keywords: Partnership, University Collaboration, Project Development, Memorandum of Understanding, Collaborative Planning, Development

Introduction

What is a real partnership? Why do some partnerships work effectively to achieve common goals and strengthening each member of the partnership? Why do others accomplish little and often end in miscommunication, frustration and strained relationships? When some universities boast of their partnerships with universities in other countries, they cite the number of memoranda of understanding (MOU) that they have signed as evidence of partnerships. An international programs director at one U.S. university, however, stated that he was cutting the number of memoranda of understanding with universities in other countries from 200 to approximately 25 because most of the documents were out of date and had amounted to little more than good intentions. Partnerships, however, can be much more than good intentions. They can increase the expertise available for a project and enable the partners to share a workload that is too large for each partner. They can raise the prospects for funding by strengthening proposals and allowing a synergy of resources. They can strengthen advocacy efforts and enhance the reputation of individual partners. They can expand opportunities for staff development and provide future benefits that were not even anticipated when the partnership was formed.

Due to the recent economic downturn, Martin and Samels (1994), authors of *Merging Colleges for Mutual Growth: A New Strategy for Academic Managers*, predicted that mergers between universities would occur. More recently, however, they stated in *The Chronicle of Higher Education (2002)*, "We were wrong; try partnerships, not mergers." They now advocate "strategic alliances" in order to preserve educational missions, strengthen and enrich fundamental objectives, maintain academic-governance systems, create new income streams, save resources and cut costs, and provide new opportunities for

teaching and research. Partnerships are also encouraged by globalization.

Globalization has meant that more institutions of higher education are mindful of their roles in the world beyond their communities, states or provinces. Globalization, with its rapid and continuous change, has also created frustrations as to "how" to get involved in meaningful partnerships beyond national borders. It has thrown old relationships, based on the post-World War II understanding of development, into question. Immediately after World War II, development was defined by the "developed" countries as a process that they initiated for the benefit of "underdeveloped" countries. This relationship was inherently unequal. In the 21st Century most policy makers want their countries to be treated as equals at least in terms of decision making.

International partnerships are critical if universities are to be globalized. Understanding globalization and operating with a global perspective is especially critical if U.S. land-grant universities are to realize their mission and serve their constituents (students, faculty, staff and citizens) in this global age. Partnerships mean different things, however, to different institutions and individuals. So, how do universities in different countries decide what they mutually need when they seek partnership? How do they create partnerships that are dynamic and beneficial? How do they evaluate partnerships once they are established? These are the key questions that this article addresses.

The purpose of this article is to explore issues related to developing university partnerships across national boundaries. The two co-authors approach these issues from different points of view and from different experiences. Combining those different perspectives, they draw conclusions about forming successful partnerships. Since their experience is primarily with U.S. land grant universities

(public universities established by Congress beginning in 1862 to teach agricultural and mechanical sciences), this article focuses on those universities. Most of the issues, however relate to universities, research institutes and development organizations in other countries as well.

Background

The Association for International Agricultural and Extension Education (AIAEE) recognizes the importance of this issue of partnerships. At the 2002 annual conference of AIAEE, Michael McGirr, then Acting Director of the International Programs Office of CSREES, U.S. Department of Agriculture, was asked to lead a special session to focus on institutional partnerships. McGirr had been involved for over 15 years organizing projects where U.S. universities partnered with universities, governmental agencies and non-governmental organizations for international development. McGirr asked Arlen Etling, Director of International Programs in Agriculture for the Institute of Agriculture and Natural Resources, University of Nebraska, Lincoln, to present his perspectives in the special AIAEE session. Etling had worked on international development projects requiring partnership since 1967. Most of his experience was as a faculty member at three U.S. land grant universities.

Despite differences in background, McGirr and Etling found that they agreed on most of the issues related to forming partnerships. The special session on partnerships began a conversation between the two individuals that helped them define partnership more precisely and identify many of the issues related to forging successful partnerships. They especially agreed on the guiding characteristics of partnerships, on the pitfalls in forming partnerships, and on the need to carefully consider the cross-cultural dimension. They agreed on some practical tips to help others forge their own partnerships.

Characteristics

Strong, productive partnerships seem to have a number of common characteristics:

- shared goals and values (not necessarily identical, but compatible and defined at the outset),
- clear expectations (right from the start, but with understanding they can change over time),
- joint planning (collaboratively set goals and implementation plan; roles of individuals working on collaborative projects are clearly defined),
- trust is developed and maintained (trust takes years to build, but can be jeopardized by a single misstep),
- perceived rewards must outweigh risks,
- open/honest communication (reaching agreement before acting unilaterally is critical),
- “win-win” outcome anticipated (mutual self-interests are essential in any partnership),
- commitment from the top (strong support from top administrators facilitates the promotion of partnership by those who implement partnership activities),
- flexible, adaptable (allows partners to broaden or narrow the scope of work, and to strengthen relationships),
- synergy (total value of the partnership is greater than the sum of the parts),
- equity (lopsided costs or benefits to partners can create problems),
- all partners contribute (similar to equity – can be more problematic with multiple partners),
- enduring rather than episodic (promotes longer-term sustainability), and
- expanding and growing (good partnerships often grow in unpredictable, yet beneficial ways).

Obviously these characteristics are interrelated. Building a partnership is like building a spider web. Strengthening one characteristic will help to strengthen others; but if too much effort is spent on one characteristic, others may suffer.

Pitfalls

Neglecting any of the above characteristics would be a pitfall in constructing a partnership. Especially important, and to be avoided if at all possible, are:

- any action that creates mistrust,
- ignoring organizational hierarchy,
- acting unilaterally,
- not sharing control,
- one partner dictating to another,
- poor communication,
- inability to mesh different systems (decision making, accounting, supporting personnel),
- not sharing rewards and credit, and
- not sharing risks and failures.

Most of these pitfalls result from poor communication. When one partner does not keep the other informed, problems may cascade. This pitfall can be avoided if key individuals are selected at each partner institution to handle communication. These key contacts must also have backups in case the primary contact is unavailable at a critical point in the communication. Likewise, communication should be constant and maintained in a calm tone. Infrequent communication, punctuated by panic, can be very destructive.

Communication within the partner institutions is also critical. If disagreements exist internally, if different individuals speak with different priorities for their institution, or if changes occur within the institution that change its message to external partners, communication problems with partners are likely to result.

The Cross-cultural Dimension

Building a partnership with universities in different countries creates the potential for additional cross-cultural challenges. In such cases there is more room for misunderstandings to occur, making trust and effective communication that much more important. Language differences and nonverbal communication can send messages that were unintended and confusing. Stereotypes must be overcome – national, ethnic, gender and/or organizational biases are destructive. Formality and protocol must be observed, especially in the early stages of partnerships. Over all of these issues hangs the specter of employing a “colonial” approach when one partner believes it has most of the resources and expertise or, conversely, a partner perceives that it has less to contribute to the partnership and is merely a passive beneficiary.

Practical Tips

These characteristics, pitfalls and consideration of the cross-cultural dimension suggest some practical advice. Before you enter discussions with another institution, call an internal meeting to make certain everyone agrees on the purpose of the partnership. Include individuals in this meeting who have experience with the culture of the prospective partner institution. Choose partners carefully. Research their capabilities, vision, values, past projects and partners. Consider the value they will add and the reputation they will bring with them. Consider the characteristics of a strong partnership and the list of pitfalls before approaching a potential partner.

Reach outside your circle of contacts. Consider a wide range of potential partners before you focus too narrowly. Old partners can be more comfortable, but probably will not stretch you in new directions. Develop a capabilities statement (like an institutional resume) to clarify institutional strengths and weaknesses. Do not disguise or ignore potential problems at

this point because they will likely emerge again later. Identify specific areas of common interest. State these clearly for each other. Build upon personal relationships – but do not over-emphasize personalities over more important considerations. Take small steps, to build trust and rapport, and then scale up. Appreciate and benefit from the differences that you uncover as you proceed (they are one of the reasons you decide to partner in the first place). Be sensitive about when to compromise and when to hold your ground.

Recognize when it is time to quit. This may occur when you encounter irreconcilable differences, when key individuals in the partnership experience burnout, when institutional support for the partnership changes, or when the conditions calling for partnership no longer exist. Collaboratively monitor and evaluate the partnership. Market your successes. Report the accomplishments. Circulate successes

and accomplishments so they are not ignored or forgotten. Finally, learn from failure.

All of these characteristics, pitfalls, practical tips and consideration of the cross-cultural dimension are preliminary to the process for forming a partnership. Let us now turn our attention to that process. Two steps are recommended: 1) at your own institution, discuss the issues related to the partnership so that internal agreement (agreement among faculty, staff and administrators internal to your institution) exists; and 2) develop a partnership plan with the prospective partner institution.

Internal Agreement

To guide discussions at your own institution, the authors suggest the following questions (Table 1). They can be used for building consensus.

Table 1

Project-Analysis Worksheet

Potential project on _____ (subject matter focus) with _____ (partner).
 What other subject matter might complement the primary focus?
 Why should we focus on this project with this partner?
 What are we currently doing with this subject matter? What does the literature indicate?
 How would our partner benefit from this project? Who, specifically, would benefit?
 How would our institution benefit from the project? Who, specifically, would benefit?
 How could activities be expanded to benefit more groups or individuals?
 Who might have funds to support this project?
 Write 1-3 specific, measurable objectives that would satisfy most of the stakeholders:
 Is there more than one focus/project here?
 Who will keep this group talking/planning?
 Chair _____
 Co-chair _____
 Next meeting date _____ Who else should be invited?

Planning Collaboratively with the Prospective Partner

Developing partnerships, we believe, is similar to a program-planning process (Etling & Maloney, 1994) where one considers the situation, assesses needs, writes objectives, analyzes resources, and formulates a plan that is then implemented and evaluated. The Participatory Rural Appraisal (PRA) is another approach (Selener, et al., 1999; World Resources Institute, n.d.) that has been used for many years to assess needs and develop resource management plans in an inclusive manner that assures buy-in. Although it is not normally used as a means to initiate educational partnerships, PRA adapted to university settings provides a logical and practical methodology for guiding partnership development.

PRA consists of eight steps: 1) site selection, 2) formation of a team representing stakeholder groups and technical expertise, 3) data collection (using diverse techniques) on problems and opportunities, 4) data synthesis and analysis in a humanistic manner, 5) ranking problems and opportunities, 6) writing a resource management plan, 7) implementation, and 8) evaluation of the process (World Resources Institute, n.d.).

Its advantages are: 1) systematic involvement of all concerned, 2) interactive, interdisciplinary problem solving, 3) quick, inexpensive, and easy to accomplish, 4) balances perspectives of insiders with outside specialists, 5) helps communities to prepare proposals for external support, 6) mobilizes participants to act, 7) strengthens relationships among participating groups, and 8) participants tend to “wake up” to a new reality (Selener, et al., 1999).

Either the seven steps of the program-planning process or the eight steps of PRA could be used as a framework to guide partnership discussions. Specific steps and detailed questions would need to be elaborated, however, to make this process work.

Evaluating Progress toward Partnership

How do we know if partnership has been achieved? We need a scale that describes the degree of partnership. The authors propose, based on their experience, the following scale (Table 2) that moves from “potential partners” through five levels of progressively stronger partnership. Other scales may be developed through experience in partnering.

Table 2

Partnership Levels

Levels	Partnership Actions
Potential Partners	Each partner agrees that partnership would be desirable.
1	Partners have signed an MOU, joint proposal or other formal document of intent to collaborate.
2	Joint meetings and/or exchanges of individual faculty and/or students over the last five years but exchanges are not necessarily coordinated or consecutive.
3	Reciprocal exchanges involving both faculty and student groups for more than three consecutive years.
4	Partners are working to implement a written plan with a shared budget for less than three years; they may or may not be co-equal decision makers.
5	Working together on a formal agreement with a written plan and shared budget over three or more years as co-equal decision makers.

Summary

So, how do universities in different countries decide what they mutually need when they consider partnership? They can review the characteristics of partnerships to help decide which aspects are important to them. They should consider the potential pitfalls and the cross-cultural dimension to determine if the costs of forming the partnerships are likely to be offset by the benefits.

How do they create partnerships that are dynamic and beneficial? They should follow the advice in the Practical Tips section above as well as the sections on Internal Agreement and Planning Collaboratively with the Prospective Partner.

How do they evaluate partnerships once they are established? This can be done by using the partnership levels scale (Table II). The list of characteristics, the pitfalls, and the practical tips will also serve as checklists for formative and summative evaluation.

This is the authors' advice based on their experiences in developing university partnerships over the last thirty-eight years. The next step is to construct a set of steps and questions, or an instrument, to guide the collaborative planning stage. Those steps and questions can be organized within the seven steps of program planning or the eight steps of PRA. Then that instrument and the authors' suggestions need to be tested through practice and through formal research studies.

Universities, and other institutions and organizations, are increasingly being requested and required to form partnerships.

They need to avoid the current trial-and-error approaches that often lead to static, unfocused partnerships. They need to develop stronger institutional partnerships that benefit all institutions and individuals involved. Using the characteristics, pitfalls, cross-cultural dimension and the practical tips from this article, educational leaders in universities and in other organizations can develop partnerships that move beyond the MOU to a more useful and more stable partnership.

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Forging International University Partnerships: One Approach

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Abstract

In a previous article (Etling & McGirr, 2005) the authors identified and discussed a number of issues with partnerships between U.S. universities and institutions in other countries. These partnerships have often been problematic. The purpose of this article, a model-building case study, is to describe one approach to forming such partnerships. This approach consists of a process that grew out of the conclusions in that previous article. Those conclusions were combined with 1) a review of literature on partnerships and coalitions and 2) opinions of a panel of experts. Experts were questioned by e-mail to determine key questions and issues that should be addressed during partnership formation. From the three sources, guidelines for building partnerships were developed, organized into a Partnership Exploration Instrument, and then tested with six different institutions in five different countries.

Keywords: Partnership, University Collaboration, Project Development, Memorandum of Understanding, Collaborative Planning, Development

Introduction

U.S. universities are often approached by institutions in other countries to form partnerships. The current world system of globalization encourages partnership at many levels (Bryant, 2003) and some grants require partnerships. Attempts to forge partnerships, however, often fail. Currently many universities employ the memorandum of understanding (MOU) to develop partnership. Because the MOU uses a standard format to address a few legal issues, it has limited flexibility as an effective approach to forging partnerships. While implementing the MOU, university representatives often employ a trial-and-error approach that ignores key steps or issues in a particular process for building partnership. The result is often a weak or unfocused partnership.

In a previous article (see pages 15-21 of this issue), the authors described their thoughts about partnerships based on their own experiences over a thirty-five year period. They described the characteristics of an effective partnership and provided suggestions for forming one. One of their recommendations was that their guidelines be expanded and organized into an instrument that could be used by others who wish to forge partnerships with institutions overseas. They suggested that the steps for Participatory Rural Appraisal be used as a format for the instrument.

The purpose of this article, a model-building case study, is to describe how that instrument was constructed and tested. This Partnership Exploration Instrument was developed using the conclusions and suggestions from the previous article, a review of literature on partnerships and coalitions, and the opinions of a panel of 20 experts. Experts were questioned by e-mail, using a modified Delphi questionnaire, to determine key questions and issues that should be addressed during partnership formation. The resulting instrument was then tested with six different institutions in five different countries that happened to be

pursuing partnerships with the University of Nebraska, Lincoln. It provides one approach for forging institutional partnerships for international projects.

Review of Literature

While there is limited literature that addresses the mechanics of forming partnerships between universities in different countries, other sources on business partnerships, academic partnerships and inter-organizational coordination are pertinent.

Mulford and Klonglan's (1979) work on inter-organizational coordination comes from their experience with extension community development programs at Iowa State University. Their extension publication is an excellent resource to begin to understand some of the issues of partnerships between local community organizations. They discuss "degrees of coordination" ranging from a) informal and infrequent contacts between individuals to z) merger (the two organizations become one). They also discuss a simple process for implementing coordinated programs. This process provides a general guide for developing a partnership.

Although Weisbord (1992) does not directly deal with partnerships between organizations, he does address the process of bringing together key stakeholders to discover common ground. One chapter on building collaborative communities (pp. 35-44) provides ideas about the process of developing partnerships. This is a business book about the planning process. While an excellent source on group process, this text does not deal with many important issues in building partnerships.

Beyerlein, Freedman, McGee and Moran (2003) focus on organizational development with most of their examples coming from business. They do include a chapter on service organizations and one on "collaborations in virtual settings." Their book is organized around "ten principles of collaborative organizations" that include

seven principles relevant to universities or international organizations: 1) focus on business results; 2) enforce a few strict rules; 3) exploit the rhythm of convergence and divergence; 4) improve communication; 5) foster personal accountability; 6) treat collaboration as a disciplined process; and 7) promote flexibility. They provide a “collaboration diagnostic tool” (checklist) that, with some adaptation to the university setting, could be useful to evaluate partnerships.

Austin (2000) also provides an excellent resource on partnerships. He writes primarily for “nonprofit and business leaders who are seeking ways to partner effectively...” (p. xi). He discusses many types of alliances, many not relevant to universities, and provides brief case studies. Chapter Two describes possible stages of the evolution of a partnership. Chapter Five discusses evaluation of partnerships. Chapter Eight presents guidelines and key questions for organizing partnerships. He also emphasizes the importance of carefully selecting a partner before beginning serious discussions about the partnership.

Bryant (2003) focuses on business partnerships. He uses drama as a metaphor for the partnership development process and he acknowledges globalization as the context in which partnerships are formed. He discusses six “dilemmas” in forming partnerships: threat, persuasion, rejection, positioning, cooperation and trust. Certainly each of these dilemmas is an important issue. Bryant’s focus on the business sector, however, and his propensity to coin new terms, or to give new meanings to well-known terms, tends to be confusing and requires considerable interpretation so that his fascinating insights can be applied to the university setting.

Faulkner (1995), a management consultant, emphasizes “strategic alliances.” He addresses such key issues as: 1) which type of alliance to use; 2) how to choose partners; 3) how to set up a strategic alliance; and 4) how to manage the alliance.

Although he focuses on business and industry in his examples and case studies, many of his points can be translated to the university setting.

The Global Development Alliance Secretariat (2002) of USAID has published a “how-to guide” for alliance builders related to international development projects. The guide deals with many practical issues of building alliances between USAID and its public and private partners. It describes the attributes of a good alliance, how alliances are formed, the pitfalls of such alliances, how they can be managed, what constitutes success and how the alliance relates to USAID’s normal legal, procurement and management systems. While a useful resource, the disadvantages of this guide, at least to universities that want to form partnerships, are that everything is focused on USAID, and it is primarily based on a business model. A balanced partnership between two universities is not even discussed.

Other governmental and non-governmental organizations are also concerned with partnership development. Like USAID, however, they tend to focus on their own organizational missions and structures. They are not particularly helpful in guiding a U.S. university to develop a partnership with institutions in other countries where the partnership is based on collaboration among equals in a non-profit context.

A number of internet web sites deal with educational partnerships. The most useful appear to be: 1) Colleges and Universities Partnering for International Development, 2) Educational Partnerships Case Studies, and 3) Global Education Partnership. The first site provides a listing of U.S. universities seeking international partners. The last two sites mostly provide case studies of primary and secondary school partnerships. While these case studies do not describe how to form partnerships, they provide examples of successful partnerships.

These sources suggest some guidelines to guide the process of forging partnerships. They support the conclusions of the previous article that identifies characteristics of productive partnerships, pitfalls, cross-cultural concerns, and issues of evaluation.

Procedure

While this review of literature was underway, a panel of experts (20 international programs directors in colleges of agriculture at land-grant universities selected because of their participation in discussions on partnerships through the International Agriculture Section of the National Association of State Universities and Land Grant Colleges) was surveyed. Information from the experts was collected using a modified Delphi questionnaire conducted via the internet in two rounds. In round one the experts were asked, "What questions would you ask a representative of another institution that proposed a formal partnership with your institution?" In round two the answers from round one were combined with items suggested by the review of literature and from the authors' suggestions from the previous article. These items fit nicely into the pattern of responses from the experts during round one of the survey. The combined list of items was then submitted to the experts for them to agree, amend, and return. A third round of the Delphi process was not needed because of the consensus of agreement among the experts in their responses during round two. These responses formed a set of guidelines

that were organized according to the steps of the participatory rural assessment methodology (World Resources Institute, n. d.). See Table 1 for the set of guidelines.

The instrument was then field tested with six educational institutions in five countries: 1) Establishment National d'Enseignement Superior Agronomy en Dijon (ENESAD), a French university in Dijon; 2) Inter-American Institute for Cooperation on Agriculture (IICA), an educational support organization located in Costa Rica, initiated by the Organization of American States, and funded largely by the World Bank and Latin American countries, that assists ministries of education and agriculture in member countries); 3) the University of Colima (Mexico); 4) the Malaysian Ministry of Agriculture; 5) the Tibetan Agricultural and Animal Husbandry College; and 6) the University of Tibet. Testing involved using the instrument to guide face-to-face discussions between representatives of the partner institutions so that they could develop plans for collaboration on specific projects. After the field testing, minor refinements were made and the final Partnership Exploration Instrument resulted (Table 1).

An Instrument to Guide the Partnering Process

Table 1 presents the complete Partnership Exploration Instrument. It describes important steps and key questions to guide partnership discussions between representatives of institutions and organizations in different countries.

Table 1

Partnership Exploration Instrument

Part A: Steps	Key Questions/Processes
1. Purpose:	<ul style="list-style-type: none"> To explore the possibility for new or expanded partnership between our two institutions.
2. Preliminaries:	<ul style="list-style-type: none"> Given the schedule, how should our time be used? Who should be involved in these discussions (include at least two persons from each institution)? Background. What is the current situation (climate) at the two universities that encourages or discourages partnership? Clarify values – What institutional values will help or hinder partnership? See sample values section (Part B) below. Do we agree on ground rules for working together? See sample ground rules (Part B) below.
3. Sharing New Information:	<ul style="list-style-type: none"> Maps of physical facilities. Organizational chart(s). What are our strongest academic programs? What are yours? Other graduate, undergraduate and non-degree programs of interest. How will we each bear the burden for funding? What external grants should be pursued? What other information would you like to receive from our institution? How do we go about assembling needed information? What are the next steps?
4. Analyze:	<ul style="list-style-type: none"> Analyze and synthesize data. Collect more data if needed.
5. Rank:	<ul style="list-style-type: none"> Rank strengths, needs and opportunities.
6. Write a Plan:	<ul style="list-style-type: none"> A plan that tells 1) <u>who</u>, 2) <u>does what</u>, 3) <u>when</u>, so that priorities are addressed.
7. Implement the Plan:	
8. Evaluate:	<ul style="list-style-type: none"> How will we evaluate our partnership? Who will be responsible for evaluation? How will evaluation results be shared?

Table 1 (continued)

Part B:	Key Questions/Processes
<p>Values: (Example from one U.S. university)</p>	<ul style="list-style-type: none"> • We attempt to <u>balance</u> our program emphasis among faculty, students and residents of the state while linking with partners outside our state and the United States. • We emphasize <u>partnership</u> over development; partnership requires teamwork. • We value creativity over money; we value integrity over competitive advantage. • Our ethical principles will include universal values embraced by the major religions and by humanistic philosophies. • We will not try to be all things to all people everywhere all of the time. • We will not accept funds that do not fit our program priorities and partners' needs. • Moderation is preferred over excess. • We will emphasize innovation over duplication; we will seek new methodologies for program planning, implementation and evaluation, rather than relying on methods that are no longer consistent with our values and ethical principles. • We will question everything and invite partners to do the same.
<p>Ground Rules for Developing Partnerships:</p>	<ul style="list-style-type: none"> • We must respect each other's differences, strengths and needs. • We must clarify internal (within the institution) conditions and external conditions that affect our respective strengths and needs. • We must be open, transparent, throughout this process. • We must maintain confidentiality of information shared through this process to prevent any penalty to a partner for openness and transparency. • We must agree that partnerships are complex and tenuous – much effort is required to create them and much effort is required to maintain them. • We need to explore opportunities and impediments to partnerships in depth while avoiding unnecessary complexity.

Table 1 (continued)

Part C: Questions and suggestions for later meetings (or correspondence):

- Have previous contacts been positive? Any negatives?
- Do any formal agreements exist? Is a formal agreement required?
- Do they need to be updated? Do both sides have copies?
- Do we know how many of our (and their) undergraduate and graduate students plan to study outside the country? Can we find out? How?
- What other partners (especially other U.S. land-grant universities and consortia) do you have already? What have you learned from these partnerships?
- How many levels of bureaucracy have to be involved in decisions about the partnership?
- Share any documentation (including existing reports, articles, and brochures) that will make the data collection simpler or faster.

Collecting New Information:

- Follow the agenda/schedule with representatives from both sides of the partnership involved in each phase of data collection.
- Maintain flexibility (be prepared to add questions or skip questions as necessary).
- How many students are enrolled? How many faculty members are employed?
- What facilities exist to house students and faculty? What medical facilities are available?
- What are entrance requirements for students from the other institution? Is language fluency required? Is there appropriate instruction offered for the required language?
- How reliable is communication, fax, e-mail, internet?
- How are visitors from the partner's country viewed by locals? Are there political or social problems for visitors from particular countries?
- How do the research, teaching and outreach efforts of each university complement and enhance the research, teaching and outreach efforts of the other university?
- How do our needs match with your strengths and vice versa?
- Where is the common interest? Should we share more information on our stronger programs that correspond to common interests?
- Should we expand our focus at this point or move to the next step (narrow the focus)?

Analyzing and Synthesizing Data:

- Who will analyze and synthesize data collected? How will this be done?
- When will information be shared with other partners?
- How can we be certain we have identified all strengths and needs of each university?

Table 1 (continued)

Part C: Questions and suggestions for later meetings (or correspondence):

Rank Strengths, Needs and Opportunities:	<ul style="list-style-type: none"> • Rank Strengths (in terms of their importance to the partnership). • Rank Needs (in terms of their importance to the partnership). • Rank Opportunities for the partnership. • What can we do better together than apart? • For what grants might we be more competitive as a partnership than individually? • How can we benefit from each other's resources? • Who on my campus is likely to want to participate?
Plan: (should be revisited as conditions change).	<ul style="list-style-type: none"> • Both universities should have current copies of the partnership plan so that it can be shared, at any time, with individuals internal or external to the universities. • What is the purpose of the partnership as determined by previous steps? • What are specific objectives of the partnership? • What will be the outcomes of the partnership? Impacts? • How will this plan be financed? What funds are available? • How will responsibilities for expenses be balanced?
Implement:	<ul style="list-style-type: none"> • Follow the plan, maintaining flexibility as conditions change but also maintaining communication as changes are made. • What are the constraints to implementing this plan (travel, cost, safety, attitudes)? • A "point person" should be designated by each institution to maintain the plan and the communication. A "backup" to the point person should be designated in case the "point person" is temporarily unavailable. • Trust must be maintained by close communication between the point persons of each university but the partnership must be supported by commitments of a broader range of administrators and faculty than just the designated point persons.

Conclusions about the Instrument

Field testing the Partnership Exploration Instrument proved that it was useful. It helped to prepare for partnership discussions, to raise pertinent questions in an organized manner, and to assess progress in partnership discussions.

Representatives of the six institutions where the instrument was tested reacted favorably. They were able to follow the instrument (they were always given a copy to follow during discussions), they agreed

with the values statements and the ground rules. They agreed to use the instrument as discussions on partnership continued. In every case, however, after the initial use of the instrument, circumstances intervened that delayed or diverted use of the instrument. In Dijon, agreement was reached on an exchange of graduate students (as the next step of the partnership) and a document was drafted but not signed for a year due to a crisis in Dijon that took precedence. With IICA, e-mail difficulties, then a change of

administration, caused a long lapse in communication that interrupted the momentum toward partnership. In Colima, the partners agreed to pursue a grant with four other institutions but one of those institutions failed to provide needed information before the grant deadline expired. Disappointment led to a lapse of communication about the partnership. In Malaysia, a proposal for a major project was written but institutional approval lagged for over a year delaying discussions on the partnership. In China (both institutions), partnership plans had to be approved by a political body outside the universities. Approvals were positive, but slow. In the case of the Tibetan Agricultural and Animal Husbandry College (TAAHC), a detailed plan, consisting of priorities and action steps, was produced and eventually signed.

In all cases we found that the Partnership Exploration Instrument takes time to complete. If, however, the partners do not get to a written plan before bureaucratic delays, changes of key personnel, crises or other priorities intervene, momentum is lost and it is difficult for the partners to return to the instrument. Discussions seem to start over from the beginning after such delays. On the other hand, we found that delays that would normally kill discussions can be overcome by use of the instrument and the written notes of those who use the instrument.

Results do indicate that the Partnership Exploration Instrument, if followed carefully with consideration for the local culture, institutions and personalities, can help:

1. define “collaborative development,”
2. outline the steps of a process that is complete and transparent,
3. provide guidelines and key questions for participants to complete each step,
4. insure equality among participants, avoiding coercion and manipulation,
5. describe how data will be collected in order for decisions to be made,

6. take account of different ideologies among partners, and
7. lead to a “win-win outcome.”

The Partnership Exploration Instrument can also benefit offices and agencies of the US Department of Agriculture (USDA) in their work with their land-grant partners. The instrument can guide a process for collaborative needs assessment that can lead to strong university partnerships focused on priority educational programs that will benefit the partners.

USDA now has a tool that may enable it to:

1. insure responsive, efficient, and effective management of USDA’s extramural research, extension, and education programs,
2. provide a process to help client universities focus on priorities and self assessment,
3. insure that needs assessment is a prominent part of program planning,
4. gather and assess stakeholder input,
5. clarify expectations of potential partners and identify potential conflicts sooner,
6. promote multidisciplinary projects,
7. integrate teaching, research, and extension activities in international projects,
8. overcome barriers between government agencies and academic institutions, and
9. strengthen efforts of universities to globalize their programs in order to help students, faculty, and agricultural producers become more competitive in global markets.

These benefits may also apply to other governmental and non-governmental agencies and organizations that work with institutional partnerships.

Instrument Recommendations

The Partnership Exploration Instrument should be provided to all directors of international programs in agriculture at land-grant universities. Their assessment of the instrument should be requested after they test and evaluate the instrument in ways suitable to their respective situations.

When reviewing the instrument or preparing to use it, users should adapt it to local conditions.

While using the instrument, administrators, faculty and staff should 1) follow the steps and questions in sequence as given; 2) take enough time at the first meeting(s) to work through Part A that includes all eight steps, but in an abbreviated format; 3) then, as time allows, move on to Part C. This may be done after the first meeting or it may be done by e-mail. At least two persons from each institution should be involved in partnership negotiations to provide backup and insure sustainability.

This article focuses on one U.S. university's efforts in building partnerships with universities in other countries. The authors believe that the conclusions and recommendations, especially for the use of the Partnership Exploration Instrument, should be applicable to partnerships involving universities, research institutes and development organizations around the world. Time and experience will confirm or contradict that belief.

Summary

This innovative model-building project started August 15, 2000. The "final" report (Etling, 2002) was completed June 30, 2002. The report is final in that it is a summative report of activities and results in developing the instrument. Additional work on testing and refining the instrument is needed to establish validity and reliability. It is now time for this instrument to be disseminated widely and evaluated in diverse settings.

As individuals test and evaluate this instrument they may want to review the previous article that provides two additional instruments useful in forging partnerships (see Tables 1 and 2 on pages 19-20 of this issue).

The Partnership Exploration Instrument will help avoid the trial-and-error approaches that often lead to weak partnerships. It will help develop stronger institutional partnerships that benefit all institutions and individuals involved. Using the Partnership Exploration Instrument can help educational leaders to forge more useful and more stable partnerships.

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4-H Volunteer Leader Skills and Implications for Global 4-H Program Development

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Abstract

When 4-H originated in 1902, the intent was to improve agricultural practices and enhance quality of life for rural American families through youth development. Its success is evident; it remains the oldest and largest youth development organization in the U.S. with an increasing international component. Over 80 countries currently participate in 4-H programs, the majority of which maintain an agrarian and rural quality of life focus in program goals and curricula. Contemporary 4-H programs also convene youth from diverse ethnic, cultural and economic backgrounds through international youth exchange programs.

A unique feature of 4-H worldwide is its reliance upon adult volunteer leaders who teach and guide youth. This study reports the results of an assessment of volunteer leaders' skills to promote positive youth development among 4-H youth in the U.S. The authors developed survey items to assess seven adult skills that foster positive youth development among youth: physical and psychological safety; appropriate structure for youth development; opportunities for youth to learn about supportive relationships; opportunities for youth to belong; opportunities for youth to learn about positive social norms; opportunities for building life skills; and support for efficacy and mattering.

Study results indicate that parents who participate in 4-H as volunteer leaders tend to rate their skills to work with youth significantly higher than parents who do not volunteer to lead. These results provide important information for Extension 4-H agents in the U.S. and abroad who recruit, screen, educate and manage adult volunteer leaders to promote positive development among 4-H youth.

Keywords: Positive Youth Development, Adult Skills, International 4-H

Introduction

The 4-H program is one of the oldest and largest youth development organizations in the U.S. Over a century old, 4-H has expanded its enrollment nationwide to 7 million members, 90,000 community clubs and 560,000 volunteer leaders. Although research-based knowledge focusing on agriculture sciences remains a traditional priority in rural 4-H programs, contemporary 4-H strives to reach diverse youth in urban areas as well. It also features a more expansive and sophisticated selection of educational topics.

Since 1946, 4-H organizations have expanded worldwide with activity in over 80 countries. In the majority of developing countries in Asia, Latin America and the Middle East, 4-H has maintained its original mission of improving rural living conditions through youth development focused on agriculture and consumer science education. In much of Europe, 4-H has focused on agricultural technology, innovative practices and leadership development involving youth living on small farms and ranches. International 4-H curricula, however, have continued evolving to meet changing needs and diverse cultures. Japan's 4-H program, for example, has provided international exchange opportunities with the U.S. and other countries to enable 4-H youth to learn another language and experience cultural diversity (Radhakrishna, & Ingram, 2004). In fact, recent proposals suggest 4-H take the lead as an international youth organization to infuse global literacy incorporating curricula on community development, geography, agricultural trade, religion, language, culture, and family structure and relationships (Ingram, & Radhakrishna, 2004).

Research suggests that 4-H's strength over other youth development programs is its use of hands-on educational activities and nearly exclusive reliance upon adult volunteer leadership (Fritz, Karmazin, Barbuto, & Burrow, 2003; Hutchins, SeEVERS, & Van Leeuwen, 2002). Volunteer

leaders directly interact with and teach 4-H youth. They volunteer their time and expertise without monetary compensation and participate in several different aspects of the 4-H program. They organize, initiate, sustain and sometimes develop new, innovative 4-H projects. Volunteers also recruit 4-H members and support their participation in a variety of educational, competitive and community service activities.

Parents of 4-H members provide the largest pool of potential 4-H volunteer leaders. Many parents of 4-H members become involved in 4-H informally by helping their child participate in 4-H events. Some are recruited or volunteer to serve as leaders to share their knowledge and expertise in particular subject areas and direct 4-H projects.

New volunteer leaders may receive some education and preparation prior to assuming their program responsibilities. However, in the U.S., educational content and quality varies from state to state and even within states. Thus, leader preparation can vary substantially in terms of content, quality and requirements. For example, while some training may emphasize stages of cognitive child development, other trainings may simply explain requirements for completing a particular 4-H project, such as attendance at 4-H competitions and materials needed for 4-H record books.

Presumably, volunteer leaders experience "on-the-job" training in their role interacting with and teaching 4-H youth. Yet, while schoolteachers typically complete a structured certification process to work with youth, no such certification or clearly defined education is required for 4-H volunteer leaders (Yohalem, 2003; Walker, 2003). To ensure the long-term success of 4-H and maintain its program quality and integrity both in the U.S. and abroad, it is important to examine and understand the specific skills that help 4-H leaders to promote positive development among 4-H youth. Understanding these skills and the

role 4-H plays in preparing volunteer leaders to promote youth development can provide important future directions for 4-H organizations worldwide.

Purpose

This study examined adult skills to promote positive skill development among 4-H youth. Specifically, it compares perceived skills of parents who volunteer to serve as 4-H leaders with parents who do not volunteer as leaders to determine if differences exist. Leader preparation, in addition to experience as a volunteer leader, may strengthen specific skills needed to work effectively with 4-H youth, suggesting future directions for 4-H organizations worldwide.

Methods

Participants

Participants in a statewide study (Nevada) included all parents of currently enrolled 4-H youth in that state. A state enrollment list provided mailing addresses for the postal survey. Duplicate addresses, representing more than one 4-H member per household, were eliminated in order to provide one address per household for a total survey sample of 3,074 households. This number represents the most exact and inclusive sample of current Nevada 4-H parents. For the purpose of this study, parents were asked to indicate whether they currently served as volunteer leaders. Those parents who indicated that they did not volunteer as leaders were categorized as “non-leaders.”

Instrumentation: Adult Skills

Survey items to measure adult skills were based upon the conceptual framework from the National Academy of Science report, *Community Programs to Promote Youth Development* (Eccles, & Appleton-Gootman, 2002). This report synthesizes a wide array of youth development research, presents characteristics associated with successful youth programs and represents

the most current framework for understanding how community programs can enhance the positive development of youth. The conceptual framework is composed of eight critical indicators of quality youth development programs. The recent National Working with Teens Study (Killian, Evans, Letner, & Brown, 2004) used these critical indicators to develop eight parallel sets of items to assess skills that adults working with youth possess that foster youth development.

For this study, these items were adapted for use with 4-H volunteer leaders. In the process, the authors eliminated one set of skills pertaining to the integration of family, school and community efforts, since this indicator did not apply directly to the role of 4-H volunteers. Table 1 illustrates the resulting seven skill groups and associated individual questionnaire items included in the survey. These skill sets are: physical and psychological safety (SAFE); appropriate structure (STRUC); supportive relationships (RELAT); opportunities to belong (BLNG); positive social norms (NORM); opportunities for skill building (SKILL); and support for efficacy and mattering (MATR) (Eccles, & Appleton-Gootman, 2002; Killian, et al., 2004). Each question used a Likert-type scale using a five-point equal weighting, with 1 being “I need a lot of improvement at this,” and 5 being “I am very good at this.” In addition, each item included the choice “Don’t Know.”

A panel of Extension 4-H professionals reviewed earlier drafts of the questionnaire and modifications were made based upon their recommendations. The purpose of the reviews was to identify missing attributes and to check for clarity and comprehension of survey questions.

Procedure

In 2003, all 4-H parents received in the mail a two-page (front and back) questionnaire with instructions and a self-addressed, stamped return envelope. A cover letter was included that explained the

purpose of the survey, ensured confidentiality and thanked them for their input. Budgetary constraints precluded repeated attempts to contact survey recipients who did not respond to the initial mailing.

Other methods to increase participation rates included news releases and reminders in local newspapers, the statewide Extension newsletter, and local 4-H newsletters. The newspaper and newsletter articles notified 4-H parents about the survey so they could watch for it in the mail, complete the survey and mail it back as directed. The survey cover letter included a personal message from the Dean of Cooperative Extension encouraging participation in the survey.

The one-time data collection protocol received exemption from the University of Nevada, Office of Human Research Protection, in part based on participant anonymity. Any attempt to conduct a follow-up mailing would require an identification number that corresponded with recipients' names and addresses and a signed consent to participate. While budgetary constraints were the deciding factor in precluding follow-up mailings to non-responding contacts, confidentiality issues were also a concern for this audience. The one-time mailing procedure ensured complete confidentiality.

Results

Of the 3,074 parents surveyed, 576 returned completed questionnaires resulting in a 19% response rate. Since we did not attempt to contact the survey recipients or conduct multiple follow-up surveys, this is considered a reasonably robust response rate. Of the 576 parents who responded, 322 (56%) indicated they currently served as volunteer leaders and 254 (44%) indicated they were not volunteer leaders.

Cronbach's coefficient alpha, an estimate internal consistency or reliability of the entire set of skills (18 items) was calculated and found to be high ($r = .944$) (Carmines & Zeller, 1979). This high score indicates that the survey items as a group are reliable indicators of the skills assessed. Additionally, Cronbach's alpha scores on the seven skill subscales were all acceptable, ranging from approximately .7 for "opportunities to belong" to .9 for "providing social norms."

Table 1 illustrates volunteer leaders' and non-leaders' ranked mean scores for the 18 skills included on the survey. Both volunteer leaders and non-leaders rated their skills to work with 4-H youth relatively high, with most scores averaging 4 or higher on a 5-point scale. However, for 17 of 18 skills, volunteer leaders rated their skills higher than did non-leaders.

Table 1

Volunteer Leader and Non-leader Ranked Mean Scores of Adult Youth Development Skills

Skill Sets	Questions	Leader			Non-leader		
		Rank	<i>M</i>	<i>N</i>	Rank	<i>M</i>	<i>N</i>
SAFE	Make sure 4-H facility is safe	1	4.42	317	3	4.07	210
RELAT	Listen to youth	2	4.34	325	1	4.25	230
NORM	Ensure 4-H youth act appropriately	3	4.31	323	2	4.21	219
BLNG	Help youth feel important to 4-H program	4	4.29	320	4	4.05	216
NORM	Let youth know I have high expectations of them	5	4.27	324	4	4.05	219
BLNG	Help 4-H youth feel part of a special group	6	4.26	324	4	4.05	222
RELAT	I'm easy to approach	7	4.24	323	6	4.01	226
STRUC	Make sure 4-H youth are occupied	8	4.19	318	12	3.67	208
SAFE	Keep youth from bullying each other	9	4.11	319	5	4.02	224
STRUC	Provide age-appropriate learning activities	10	4.10	316	10	3.70	205
MATR	Encourage youth to take leadership	11	4.08	322	10	3.86	217
SPRL	Understand "youth" point of view	11	4.08	321	7	4.06	229
STRUC	Conduct activities that challenge youth	12	4.03	322	12	3.67	205
RELAT	Relate well to youth from different cultures and backgrounds	13	4.02	314	8	3.92	217
SAFE	Manage conflict between youth	14	3.92	320	9	3.81	231
SKILL	Teach 4-H youth life skills	15	3.91	317	11	3.69	205
SAFE	Keep youth from hurting feelings	16	3.85	319	9	3.89	228
SKILL	Teach 4-H youth social skills	17	3.85	318	13	3.58	205

Since we surveyed the entire census of 4-H parents (including leaders and non-leaders) statewide, a nonparametric test (Mann-Whitney U) was used to measure differences between the two groups. The test resulted in statistically significant different

skill levels between leaders and non-leaders for all skill groupings (Table 2). These results indicate that parents of 4-H members who serve as volunteer leaders rated their skills to work with youth significantly higher than did non-leaders.

Table 2

Comparison of Leader and Non-leader Skills Using Critical Indicators of Quality Youth Development

Indicators	Leaders		Non-leaders		Z
	N	Mean Rank	N	Mean Rank	
Physical and Psychological Safety	305	265	203	239	1.93**
Appropriate Structure	312	288	199	205	6.37*
Supportive Relationships	304	270	212	242	2.09**
Opportunities to Belong	319	280	211	243	2.86*
Positive Social Norms	321	281	213	247	2.53*
Opportunities for Skill Building	313	273	200	232	3.15*
Support for Efficacy and Mattering	319	281	204	233	3.66*

* $p < .01$ ** $p < .05$

Conclusions, Implications and Recommendations

The results of this study indicate that parents who are volunteer 4-H leaders tend to rate their skills to promote positive youth development significantly higher than parents who are not 4-H leaders. Further, if non-leader skill scores provide a baseline for where parents begin their involvement in the 4-H program, areas to concentrate leader education efforts emerge.

The research results presented here imply that parents receive explicit benefits in exchange for the time and effort volunteered to 4-H youth and programs. These include statistically significant improvements in skills to promote positive youth development, as compared to parents who do not volunteer. This information may help Extension 4-H professionals in the process of forming new 4-H organizations to market, attract and recruit parents to volunteer by outlining such benefits that include acquiring the skills needed to work effectively with 4-H youth. The youth development skills parents learn as a volunteer also may help enhance their own parenting and family life skills.

Although youth vary in their length and level of involvement in 4-H, and age restrictions vary internationally, parents that volunteer and learn important youth development skills can provide long-term

support for positive behavioral changes in youth long after that youth has left a program. Thus, the effects of 4-H youth participation on parents also are important to sustain positive effects on 4-H youth. Finally, Extension 4-H professionals may take greater care in screening leader recruits, as the success of 4-H also depends upon the initial leadership potential of parents recruited in addition to any formal and non-formal education received.

Recommendations for future research include assessing how the results presented here might compare with results in other countries. Although the theoretical framework adopted for this study represents the current standard for quality youth development work in the U.S., little is known about how this framework applies to youth audiences from different ethnic and cultural backgrounds. This remains an important opportunity for further research. As 4-H organizations continue to develop internationally, efforts should begin to create multi-disciplinary multi-cultural research teams to investigate program impacts on a global scale. The results of this research can help raise awareness and appreciation for diversity within the international 4-H organization and help to build a global community of Extension 4-H professionals, volunteer leaders and youth members. A global 4-H community can provide valuable

insight into future program directions, such as curricula development beyond agricultural and consumer sciences in agrarian based countries, to include programs designed specifically for youth facing a complex set of social issues in a rapidly changing world. Issues might include, for example, community development projects that hold positive youth development as its primary objective, natural disaster response strategies that seek to protect and support youth survivors, children orphaned by the A.I.D.S epidemic or wars. Orphans involved in a youth development organization would have an opportunity to learn important skills from volunteers. Parents who lost their own children might have an opportunity to help other children as a volunteer.

To summarize, regardless of where a 4-H program exists in the world, focused education to introduce and strengthen skills featured in this study can help to shape parent recruits into skilled leaders needed for effective 4-H programming. The resulting outcomes are youth, guided by adults, who are “thriving young people showing exemplary positive development in the present and become generative adults who make positive contributions to self, others, and civil society” (Lerner, 2004, p. 4). Lerner’s vision of “thriving young people” has a long tradition in 4-H as exemplified in the 4-H motto “to make the best better” for “my club, my community, my country, and my world.”

Future research, however, may attempt to isolate the value of a particular skill or set of skills over another for training and evaluation purposes. In addition, it will be important to assess if skills vary based on age, ethnicity and/or cultural background, or income level of volunteer leaders. Present results, however, reveal that 4-H leaders possess higher skill levels to work with youth than do non-leaders and provide direction for future efforts to educate leaders to work with 4-H youth. An emphasis on specific skills groups such as those featured

in this study can help those involved in the recruitment, training, and retention of quality 4-H staff. For example, although leaders generally rated themselves higher when compared to parents, certain critical skills like teaching social and life skills, relating well to diverse youth, and managing conflict and teasing were the lowest ranked skills among leaders. Such results provide direction for orientation and in-service training of staff and volunteers. Even experienced volunteer leaders may participate in focused trainings to enhance the skills they have developed “on-the-job.”

Finally, 4-H in the U.S. has initiated a national commitment to internationalizing the 4-H program further. In 1998, the U.S. National 4-H Youth Development Global Education Design Team defined future global education within the U.S. 4-H organization and outlined goals to provide 4-H youth the tools to discover a relationship to the world. Their vision is that all 4-H participants will have an opportunity to experience meaningful global learning. Their value statement is as follows: “One World; One People; One Environment; One Future; One Concern for Safety and Justice; Global Education...Our Hope” (National 4-H Headquarters, 1998). With full participation and continued collaborative research, the future holds great promise for effective 4-H programming on a global scale.

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Informal Technical and Vocational Training Programs and Farming in the Province of Isfahan, Iran¹

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Abstract

Since 1954, various informal training programs for farmers have been implemented to support them in several aspects of their life and careers in Iran. This study aimed at assessing the results of informal technical and vocational training programs (ITVTP) in the field of agriculture on the employment status of farmers in the province of Isfahan in Iran. A number of 330 farmers (equally divided over an experimental and a control group) were selected from 19 townships of the province mentioned to be interviewed. Structured questionnaires were completed during the interviews. The results show the education level of the majority of farmers in both groups is low; most of them are married, smallholder and more than 40 years of age. Statistical analysis showed there is a positive relationship between ITVTP (as an independent variable) and different aspects of the lives and careers of farmers (as dependent variables), such as job stability, job satisfaction and motivation, income generation, investments in the agriculture sector, information and competence, the employment of families, and production capacity of farmers. The findings underline the importance and supporting role of ITVTP for many factors relating farming.

Keywords: Training Programs, Technical and Vocational Education, Farming Activities, Informal Learning, Extension Courses, Employment Statue, Agriculture

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Introduction

Training and development, or human resource development, have long been recognized as an essential element and crucial factor for development and socioeconomic expansion (Walton, 1999). Recently, scientific achievements and modern production methods have changed the economy of communities and their interrelation such that, continuing training and life long learning play an important role in the process of development of enterprises, groups and individuals. Hence, the importance of a trained workforce and human resources has been the focus of attention of the majority of development programmers (Mulder, 2004; Karbasioun & Mulder, 2004; Chizari, Linder & Mohsanie, 2001; Chizari, & Karbasioun, 1998).

There is little dispute about the importance of training in the workforce. Especially in knowledge intensive domains, training is essential for competence development and performance improvement. Since long, there has been disagreement on the level of transfer and cost-effectiveness of training, which led to an increased attention to ways of supporting non-formal and informal learning. Informal training however can be implemented in different ways with different levels of perceived effectiveness (Lans, Wesselink, Biemans & Mulder, 2004). Informal training of farmers can support quality improvement of farming. It can also help them to be more efficient and successful in their activities. And since farming is a complex and multidimensional job, farmers need different kinds of competencies, which can directly or indirectly be used in their career (Van den Ban, 1998).

Various informal training programs for farmers have been implemented to support them in several aspects of their life and work in Iran and different organizations and institutions (mainly governmental) have

had the responsibility to conduct these training programs for farmers. In this study, the focus has been on informal technical and vocational training programs (ITVTP) in the province of Esfahan that are agriculture-oriented and aimed at helping farmers to overcome their limitations and difficulties they face.

A Brief History of ITVTP and its Effects

As already mentioned, the mainly agriculture-related ITVTPs were provided by the Ministry of Agricultural-Jihad, in co-operation with some other organisations in the field of technical and vocational education and the Red Cross. Connected to the implementation of the courses, an integrated evaluation system was operated, but it has not convincing enough for the authorities to make recommended changes regarding ITVTP (Karbasioun & Mulder, 2004). Nevertheless, it is visible that a great number of studies conducted showed that the courses implemented were positive and had added value (Dashti 1994; Zamani & Talebianpour, 2001; Zavvar, 1993; Zarnegar & Farjadnia, 1999; Keshavarz, 1994; Arabzadeh, 1997).

Additionally, international studies are mostly in favor of national projects; for instance, Integrated Pest Management (IPM) programs for rice were carried out in twelve Asian countries and the results were reported by Henk (2004) from Wageningen University. He concludes that IPM farmer field school programs have influenced farmers' technical and general competencies positively.

Also a remarkable number of implemented case studies in a variety of countries support this idea that training programs have positive effects on farmers with various conditions and characteristics. They have been classified to different groups based on their strategies and concepts predominantly used, target groups

and when and where they are best applicable.

These training programs could be named as: community-based training (e.g. Laos); alternate (center-farm) none-formal training (e.g. Nicaragua); center-based none-formal training (e.g. BAFIS Laos); integrated approaches or linking formal and informal training (e.g. South Africa); and Formal center-based or apprenticeship schemes (e.g. Morocco and Argentina). This categorization does not mean rigidity and should be entirely flexible. Therefore, it might be said that every thing is considered possible as long as it leads to desired impact on farmers (services for rural development, 2004).

In contrast with above researches, Kazemzadeh (2001) found opposite results in his study about the effects of ITVTP in meaty chicken keeping in Isfahan province and did not find any positive effects of the courses held by the Ministry of agricultural-Jihad to support meaty chicken keepers. He concluded that these programs failed to reach their pre-planned objectives because of insufficient time allocated to the courses and of paying too little attention to the continuity of the programs. Similarly, Rezvanfar & Vaisy (2003) showed that ITVTP should be more learner-oriented and comprehensive to be able to equip farmers with the information and skills they need.

More recently, Karbasioun & Mulder (2004), in a study about competencies of farmers in Isfahan, discovered that there is a lack of technical and general competencies among the studied farmers. They therefore recommended that ITPTV should preferably concentrate on these lacking competencies. It is also important to state that these competencies should be conducted from the organizational (farm or agri-business) and individual (farmer, entrepreneur or employee) performance perspective, since competence development only makes sense

if this performance improvement perspective is chosen (Mulder, 2004). We can conclude that the research findings are limited to certain field of work and not conclusive, and that further efforts are needed to study the relationships between ITPTV and different factors that are related to farming. In the study presented below therefore, relationships between ITVTP and various characteristics of farmers who are working in various disciplines (such as agronomy, horticulture, and animal husbandry) in the province of Isfahan are examined.

Purpose and Objectives

The purpose of this study was to examine the relationships between ITVTP in the field of agriculture and the employment status of the farmers in the province of Isfahan.

Specific Objectives

1. Recognizing personal, social, economical characteristics of target group.
2. Assessing the results of ITVTP (independent variable) on the 15 following factors regarding farmers:

Job motivation; Access to the production facilities due to better communication with suppliers and extension centre employees; Competencies for effective job performance; Agricultural and animal production capacity; The extent of applying new methods and strategies in agricultural and animal production; Employment stability; The economic situation and income; The rate of investment in agricultural and animal production; The extent of applying new technological instruments and tools in agricultural and animal production; Knowledge and information about scientific methods and stability

principles of agriculture in the job; The job diversity; The rate of employment of family members in agriculture and animal production; The quality and efficiency of the job; General information and awareness about their job; and Job satisfaction.

Methods

This study was carried out as a survey and a quasi-experimental design in the province of Isfahan. First, a complete list of all potential respondents that participated in various ITVTP held in different villages of 19 townships of Isfahan province was composed. The total number of this list was 2,220 farmers. Since the training programs encompass different agricultural contexts and deal with diverse fields, a stratified sampling was used to cover various disciplines and groups of both trained and untrained farmers. To do so, 165 trained farmers as experimental group out of the 2,220 farmers who participated in training programs were selected. Also 165 untrained farmers were chosen as control group from the whole population of farmers who had not taken part in any training programs. Since the time of participation in ITVTP is important for investigating the results of training, the period of participation from October 2002 till October 2004 was taken. Eventually 330 farmers were chosen to interview.

Efforts were made to select both groups in such a way that they had the same general characteristics as to possibly intervening variables, such as the size and ownership of land under cultivation, the number of domestic animals in the land and being villagers (staying in villages). The only difference was participation in vocational and technical courses during last two years. Therefore the independent variable in this study is ITVTP in field of agriculture and animal husbandry. The

training courses the experimental groups followed were held in different disciplines such as dairy farming, calf keeping, sheep keeping, apiculture, sericulture, floriculture, poultry farming, principles of building animal stable, industrial cow keeping, safeguarding of environment and natural resources, utilizing rangelands and pastures, agricultural mechanization, carpet knitting, rural handicrafts and artifacts. The dependent variables comprise all fifteen items mentioned above.

A survey questionnaire, including open and closed questions, was prepared and used for data collection. In designing the closed questions, a five-point Likert-type scale was applied.

Structure and Content of the Questionnaire:

1. To what extent are you motivated for your job? (8 questions)
2. To what extent do you have problems in access to the following facilities? (6 question)
3. To what extent do you agree with the following questions about your skills in your job (7 questions)
4. To what extent has your job and farming been changing during the last two years? (11 questions)
5. To what extent have you been using new methods in your farming during the last two years? (15 questions)
6. Do you agree with the following statements about the stability in your job? (11 yes/no questions)
7. What changes have happened in your income level since the last few years until now? (14 questions)
8. Do you agree with the following statements about your investment in the field of agriculture during the last few years? (10 yes/no questions)
9. What kind of tools, instruments and facilities are necessary for having a

- good production in agriculture? (6 questions)
10. To what extent are you using agriculture principles in your farming in each of following items? (10 questions)
 11. In which kind of sub-occupations in the field of agriculture you are working (agronomy, animal husbandry, land using etc)? (12 yes or no questions)
 12. To what extent do your family members help you in the farming activities? (4 questions)
 13. To what extent are you committed to do the following things in your job (for instance plant protection, on time irrigation, searching for new information)? (7 questions)
 14. To what extent do you agree with the items below (questions about job satisfaction, for example I enjoy my job; I have good income in my job; my job is boring etc) (10 questions)
 15. 17 specific questions about the general information farmers have about their job, for instance what is the common disease in chickens, and what are the main reasons for declining the pastures?

To test the validity of questionnaire, ten copies were distributed among four academic staff of Isfahan University and six experts from the Ministry of agriculture-Jihad in Isfahan. Also for assuring the

reliability of the questionnaire, it was pilot-tested amongst a group of 37 farmers who were in similar conditions as the target population. Based on the expert appraisal and pilot-test with farmers, the questionnaire was amended where necessary. Since the education level of the majority of the farmers was low, experts were selected to interview the farmers. The preliminary analysis of data was accomplished by descriptive statistics. Furthermore, because the distribution of data was not normal, and many variables had ordinal answering categories, none-parametric tests such as the Mann-Whitney U test, and Kolmogorov-Smirnov-test were used. Where allowed, T- and Z -test were performed.

Results

In this section we will present the descriptive data concerning the research group first. Then we will present the results of the comparison between the trained (experimental) and none-trained (control) groups.

The Research Group

The educational level of the vast majority of farmers in both (control and experimental) groups was low (Table 1). A large percent of them were married. In addition, 52.7% of the population of the control group and 69.7% of the experimental group were more than 40 years of age (Table 1).

Table 1

Distribution of Farmers Based on Education Level, Marital Status, and Age

Variables	Experiment		Control		Total
	N	Percent	N	Percent	
Education Level					
Uneducated	19	13.8	32	21.1	51
Primary school	79	57.2	92	62.2	171
Junior secondary school	36	26.1	12	8.1	48
Senior secondary school	4	2.9	12	8.1	16
Marital Status					
Married	160	97.0	138	83.6	298
Single	5	3.0	27	16.4	32
Age					
Less than 30	25	15.1	49	33.6	74
30-40	25	15.1	20	13.7	45
More than 40	115	69.7	77	52.7	192

Note. Percentages may not total 100 due to missing data.

Based on the latest national census in Iran (Lotfi, 2004, June 23), it can be said that being low educated and older are nearly common characteristics of farmers all over Iran. Taking this into consideration, it will be obvious how difficult it would be to support the farmers with ITVTP. This phenomenon has been reiterated in a governmental consultative committee, which is composed of 17 Iranian and 15 international consultants, and has been established by the Ministry of agricultural-Jihad recently to make essential modifications in agricultural policy. Mr. Emadi, the deputy of Agricultural-Jihad Ministry who is one of the members of this committee, contended the majority of active Iranian farmers is even more than 50 years old having very little education indeed. This

is why the traditional way of farming is still applied by these farmers (Lotfi, 2004).

Comparison between Trained (experimental) and Non-trained (control) Groups

All variables in Table 2 are comprised of various items. The number of items differs by variable. For each variable Cronbach's alpha scores were computed to test the inter-item-reliability of the variables. For instance, the first variable 'Job motivation' consists of 8 items, therefore the absolute minimum mean is 8, and the absolute maximum mean is 40 (8×5). Cronbach's alpha for these 8 items was 0.75. Given the range of Cronbach's alpha scores for the variables between 0.74 and 0.87, it can be concluded the variables were sufficiently reliable (Table 2).

Table 2

Variable Number, Variable Name, Number of Items and Cronbach's Alpha Scores for the Items within the Variable

Number	Name	<i>n</i>	Alpha
1	Job Motivation	8	.75
2	Access to production facilities	6	.83
3	Job competencies	8	.87
4	Agricultural and animal production capacity	11	.85
5	The extent of applying new methods and strategies in agricultural and animal production	15	.87
6	Employment stability	11	.74
7	Economic situation and income	14	.79
8	The rate of investment in agricultural and animal production	10	.78
9	The extent of applying new technological instruments and tools in agricultural and animal production	6	.81
10	Knowledge and information about scientific methods and principles	10	.81
11	Job diversity	12	.82
12	The rate of employment of family members in agriculture and animal production	4	.83
13	The quality and efficiency of the job	7	.87
14	General information and awareness about the job	17	.74
15	Job satisfaction	10	.78

The comparison between the control and experimental group shows a significant difference ($\chi^2 = 19.97$, $df = 3$) between the rate of education of two groups. The experimental group is more educated and married ($\chi^2 = 16.74$, $df = 1$), with more land under cultivation, more domestic animals in the farm, higher motivation, satisfaction and interest towards their job than the control

group. They also have more access to production facilities, more application of new methods and techniques in agriculture, and eventually higher economical situation and income level. Table 3 shows the effects of training programs on various aspects of the job of farmers. It is easily visible that ITVTP had influence on all enlisted factors related to the job of the farmers.

Table 3

Relationship between Informal Vocational and Technical Training Programs and Different Aspects of Jobs of Farmers

VN	Groups	M	SE	MW	Z
1	E	32.01	0.356	4473.5	-10.61*
	C	24.33	0.485		
2	E	18.51	0.358	5032.0	-9.94*
	C	11.42	0.378		
3	E	27.67	0.391	8255.5	-6.27*
	C	23.78	4.935		
4	E	21.56	0.198	1079.0	-3.33*
	C	19.91	0.264		
5	E	36.73	1.238	6535.0	-8.205*
	C	22.25	0.829		
6	E	6.27	0.128	6535.0	-8.205*
	C	5.31	0.184		
7	E	30.61	0.420	4885.0	-10.113*
	C	23.53	0.299		
8	E	5.38	0.366	6794.0	-8.170*
	C	4.31	0.188		
9	E	5.10	2.841	10545.0	-3.77*
	C	3.58	1.469		
10	E	35.72	0.799	4726.0	-10.295*
	C	19.84	0.850		
11	E	5.38	0.211	5227.0	-4.788*
	C	4.13	0.121		
12	E	13.27	0.204	5227.0	-9.747*
	C	7.38	0.390		
13	E	29.12	0.416	11457.0	-2.512*
	C	27.09	0.278		
14	E	13.12	0.198	22446.0	-5.68*
	C	11.53	0.264		
15	E	34.04	0.352	11418.0	-2.562*
	C	32.44	0.345		

Note. VN: Variable Number; E: Experimental; C: Control; MW: Mann-Whitney.

* $p < 0.01$

As Table 3 illustrates, all calculated Z-scores for the different characteristics of the jobs of the farmers are significant ($P < 0.01$). Hence, it could be said that ITVTP has had significant positive relationships with all 15 dependent variables mentioned in the table.

Conclusion

Based on the results of this study, we conclude that in general, the majority of the population of farmers in the province of Isfahan is more than 40 years of age, married, small-holder, and low-educated. This should be taken into account when designing training programs for this target group. The informal training programs should take this into account, and should be

better based on the characteristics of the target group (such as learning ability, readiness to learn, motivation to change, instructional strategy, performance improvement oriented training content).

Informal technical and vocational training as a whole has had a positive relationship with farming style and success of trained farmers in generating more qualified products and consequently achieving more satisfaction, motivation and income.

Causal relationships between the independent and dependent variables cannot be inferred based on the design of the study, since there was no baseline data, nor a pre-test for the dependent variables. Farmers with a higher level of education, and who are in a better economic and social position may have had a higher tendency toward participation in vocational and technical courses already upfront.

Recommendations

As always, training design should be aligned to the target group characteristics. The target group characteristics of farmers in the province of Isfahan are listed above. For the majority of farmers, who are thus over forty years of age, who have no or only elementary education, training will not be an easy solution to improving their performance, let alone whether they are motivated to do so. It might be the case that this target group is stuck in ways of traditional farming, based on their own values and norms, that they do not want to give up easily, since they may perceive their situation as one that is the result of generations of community practice, all which is understandable. It is also not easy to change farming practices that have grown over generations, and in which the farmers believe. And since they survived, they also have the right to believe that. For farmers with low education it is also quite hard to understand new methods and technical innovations. New knowledge may be

different from the many possible misconceptions in the minds of the farmers.

So in training design, the indigenous knowledge, values and norms, local practices, farmers' beliefs, and possibly limited levels of learning ability should be taken into account. At least, the training should be as practical as possible, directly related to performance indicators that are understandable and convincing for the farmers.

Since the research on the effectiveness on informal training is inconclusive, and there has been doubt on this even between authorities in the Ministry of Agricultural-Jihad, it is strongly recommended to use the research presented in this paper in reassessing the strategies of ITVTP in Iran. Furthermore, more explicit attention to and sufficient funds for ITVTP are to be recommended. The results of the study can be used in efforts to reach farmers who have not yet taken part in ITVTP to encourage them to benefit from upcoming programs in the future.

As to the effectiveness and noticeable positive role of ITVTP for farmers, more consideration should be given to pave the way of presenting these programs appropriately, strengthening the positive points and reducing the shortcomings of these informal courses.

Also, It is suggested to conduct further studies in other provinces, preferably countrywide so that the results can be generalized and widened to other parts of the country and possibly be integrated in the yearly development cycle of the agricultural plan, which is designed by the Ministry of Agricultural-Jihad.

Finally, as stated before the findings of this research also support many other international and worldwide studies; nevertheless, the author couldn't find any recent study with a comprehensive attention to the influence of ITVTP on various facets of the employment statues of the farmers. Thus, it is proposed that similar researches are implemented in different countries and

more specifically in developing countries where have always serious difficulties in convincing authorities to allocate sufficient fund for ITVTP.

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Tools of the Profession
Book Review

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Spanish: http://www.fao.org/sd/2003/KN12033_es.htm
French: http://www.fao.org/sd/2003/KN12033_fr.htm

This publication addresses one of the overwhelming problems of the 21st century, to which the answer is not yet found: the relationship between poverty and education. As the human population increases, problems of food security and rural poverty in particular are present everywhere and for large numbers access to basic necessities of nutrition, employment, infrastructure, communications and above all education is very difficult.

Education and training are the only way out of this situation. The funding for these activities is, however, not easy to obtain, and agricultural education in particular has suffered from the lack of interest of major donor agencies for more than 30 years. The need to revitalize and renew the approach to this important discipline within the context of the 'global village' in which all of us are now living forms the background to this book.

Examples of a modern approach to education and development are found in countries such as India, where in the fifty years since independence, the country has advanced technologically to become a major force in the global market. This achievement

could not have been possible without the proliferation of education at every level.

Many countries similarly continue their efforts to expand the basic education opportunities and to improve the quality of what is offered. The publication at hand offers many good examples in support of these efforts.

Following the introductory remarks by the coordinating team, offered in the first chapter, rural areas are defined in the complex global environment and an overview of past experiences is presented with emphases on relevancy, productivity and importance of basic education with examples drawn from diverse countries, such as Botswana, Cuba, Burkina Faso, etc.

Despite many encouraging examples from all over the world where education has been able to overcome bias of rural-urban distinction, or to remain available to the marginalized society groups, there is much work to be carried out in this respect.

The second chapter deals with issues of status and prospects of basic education in rural areas, in light of the current situation. Special emphases are given to topics such as the education of female children, HIV/AIDS

and its effect on rural education, armed conflicts, and availability of early childhood development programmes to rural pupils.

Basic education is seen as the key tool for socio-economic transformation of rural areas, and therefore should be given much more attention than it currently enjoys.

Recent experiences with relevant learning approaches are presented in the third chapter, with examples from many developing countries, while the fourth chapter discusses strategies and institutions for promoting skills for rural development. The emphases in education, according to the authors, is changing from the concept of *Agricultural Education and Training* to a broader one of *Skills for Rural Development*, which is more suited to current trends in the global economy.

Higher Education has been given full attention in the fifth chapter, where current trends of transformation and diversification are discussed, together with suggestions for reform in the Higher Education sector.

The final, sixth chapter of this publication is devoted to recapture of all the relevant issues discussed previously and possible responses to the problems encountered. The area specifically targeted for intervention and improvement is funding, where the way forward is seen in the formation of funding partnerships and other innovative schemes which would offer a sustainable way of training the poor.

The mission of higher education is also to be expanded to cover the entire area of rural development and to establish creative alliances with business enterprises. In this way, many stakeholders will be involved in the development of relevant training for rural communities.

This relevant and important publication does not offer solutions to the problems of education at all levels in developing communities, but it certainly offers a new way of thinking about the crucial issues affecting it. Many good examples scattered throughout the book give ideas about what is happening and where, what works and what should not be tried anymore, because of new factors evolving at the local and global levels.

Policies and practices that work are given much recognition and the combination of local initiatives, donor support, and national ownership is considered as a new way forward to improved training and education for all.

The relevance and timeliness of this book cannot be overemphasized: it will certainly serve as an important reference for all those interested in the future and relevance of education for the next generation.

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Association for International Agricultural and Extension Education
21st Annual Conference

Professional Paper Presentation Abstracts

Editor's Note: The following abstracts, listed by primary author's last name in descending alphabetical order, were derived from professional papers presented at the 21st Annual AIAEE Conference. Complete papers are available (Web) at <http://www.aiaee.org/2005/index.html>

Mid-Term Impact Assessment of the Ghana Private-Public Partnerships for Food Industry Development Program

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Samuel Sefa-Dedeh, University of Ghana
Doe Adovor, Michigan State University

The Ghana Private-Public Partnerships Program (GHPPP) funded by USAID through Michigan State University (MSU) Partnerships for Food Industry Development Program -Fruits & Vegetables (PFID-F&V) under the MSU Institute of International Agriculture seeks to: a) Develop an efficient logistical supply chain in Ghana capable of achieving products of specified consistency, quality and safety, (b) Develop skills and capabilities of all participants in the horticulture supply chain, (c) Support the establishment of a Ghanaian NGO with the capability to lead the horticultural industry in sustainable and profitable development, (d) Provide technical assistance where needed to entities in all segments of Ghana's horticultural supply chain. In order to achieve program objectives, GHPPP used a collaborative partnership approach that involved key players within the private sector as well as nongovernmental organizations (NGOs). GHPPP through collaboration with all partners helped establish a flourishing horticultural industry beneficial to small, medium and large-scale producers in Ghana. This paper presents a mid-term impact assessment of the GHPPP program. The results of the impact assessment indicate that: 1) More than three-quarters of all participants in GHPPP sponsored training programs view these programs as having positively impacted their production. 2) Lessons learned from visits to other successful models such as Kenya have helped farmers in Ghana improve on their horticultural supply and cold chain management techniques. 3) The mid-term evaluation has helped project implementers to adjust their implementation process to include more women beneficiaries. 4) Overall, almost all participants of GHPPP sponsored programs strongly agreed that these programs have the potential to increase their export share in global and domestic markets and that they are satisfied with implementation process.

Beyond Technology Determinism: Applying a Technology Triangle Model to Assess the Integration of Technology by Florida's Secondary Agriscience Teachers

Adewale Johnson Alonge, Miami-Dade County Public Schools, Florida

The potential of instructional technology to improve student achievement and to revolutionize American public schools has become a major focus of attention by educators and policy makers. Secondary agricultural education programs are not immune from the drive toward technology integration. The purpose of the study, therefore, was to assess how Florida secondary Agriscience have integrated technology into their programs and the constraints they confront. Of 55 secondary agricultural teachers sampled, 45 respondents completed the survey questionnaire.

The study adopted a modified Technology Triangle Model. Data analysis included descriptive statistics such as percentages, means, and standard deviation.

Among the study's significant findings were: the relatively high level of technology integration reported by the respondents including: PowerPoint (50%), word processing (78%), use of audio-visuals (95%), electronic grading (78%), requiring students to conduct internet research (48%), and use of computer lab (43%).

Major constraints to technology integration, included rapid technological obsolescence and the resultant high cost of upgrades, teachers' lack of routine computer trouble-shooting skills, poor facilities for professional development, inadequate access by students to home computer, lack of technology skills, and poor technical support.

In conclusion, teachers will only use instructional technology if they have the needed hardware and software, have the required technology integration skills, receive continuous professional development upgrades, and receive timely technical support to fix hardware and software problems that are synonymous with technology use. These are the challenges that the agricultural education profession must address in order to encourage teachers to integrate technology.

Youth Leadership for a Changing World: The Future Farmers of Turkmenistan

Randall J. Andreasen, New Mexico State University

An ongoing development project in the central Asian country of Turkmenistan, the Future Farmers of Turkmenistan (FFT), sought to organize a national youth leadership organization, patterned after the United States youth organizations of the FFA and 4-H programs. Initiated as part of the Farmer-to-Farmer program of the USAID and contracted through Winrock International, the FFT project began simply in small, scattered groups organized in several states or Velayats throughout Turkmenistan.

After the initial organizational phases of the consulting project and with the continued organization of FFT clubs, a national effort was undertaken to organize a national convention to standardize FFT policies, structure, and to develop unifying standards for the sustainability of the FFT. This paper will outline the organization of this inaugural national convention and the feedback and comments of the participants.

Criteria for Deciding the Breadth and Depth of Topics in a Time-Constrained One-Semester Agroforestry Course

John K. Boateng and Ephraim M. Govere, The Pennsylvania State University

Many universities, especially in Sub-Saharan Africa, cannot afford to offer more than one agroforestry course due to limited funds, skilled personnel, and/or physical facilities. They have to make tough decisions on the breadth and depth of topics to be covered in a time-constrained one-semester agroforestry course. In this paper we present the theoretical base and an example of the application of an AGROforestry COurse DEcision Model (AGROCODEM) as an aide in deciding whether a time-constrained one-semester course has adequate breadth and depth. AGROCODEM consists of six factors: knowledge, attitudes, skills, aspirations, inspirations, and intentions with each factor having seven elements that serve as decision-making criteria. An agroforestry course has adequate breadth and depth if, and only if, it has potential to cause positive agroforestry knowledge, attitude, skill, aspiration, inspiration, and intention (PAKASAI) changes in the learner. The AGROCODEM decision model is intended to provide

educators with new ideas and serve as a decision criterion for topics and details to be covered under each topic and hopefully it will help to improve syllabi for time-constrained one-semester agroforestry courses being offered in colleges and universities in Sub-Saharan Africa and other regions of the world.

Exploring the Quality of Life of Farm Families in Ireland

Pat Bogue and James Phelan, National University of Ireland

Quality of Life is commonplace term, which is rarely adequately defined. The complexity of the concept and its interpretation poses challenges for measurement. The improvement of the quality of life of farm families is an aim of the Teagasc Planning Post Fischler Programme. The primary purpose of the research in this paper is to establish a baseline measure of the quality of life of farm families. A secondary research aim is to compare the quality of life of farm families with others. The research survey was carried out with 344 families (farm, non-farm rural and urban). For the purposes of this study quality of life was defined as the perception and feeling about one's current life experience (including family, social, economic/work, personal development/success). Farm families work longer hours and have greater income uncertainty but there is no significant difference between their quality of life and that of rural and urban dwellers. The negative aspects are balanced by being one's own boss, doing a job they like and working/living in the countryside. The findings relating to a number of key factors relating to quality of life are documented. In order to derive a comparative measure of quality of life a 'life quality index' was constructed. The index included variables relating to: social activities; involvement in organisations; attitudes towards incomes; expenses; borrowings; hours of work; life; and quality of life. The research findings serve the purpose of informing extension agents about quality of life and providing a baseline for future measurement.

Perceptions of Leaders toward IPM Farmers' Association Group Formation in the West Java Province of Indonesia

Cliffton R. Bonzo and Rama B. Radhakrishna, The Pennsylvania State University

Integrated Pest Management (IPM) Farmers' Associations in Indonesia originated from activities related to the Farmer Field Schools (FFS) educational system. The Food and Agriculture Organization (FAO) worked closely with the FFS program in Indonesia from 1989 to 2001. During those years 75,000 FFS were conducted, 1.1 million farmers were trained and 29,500 farmer trainers were equipped to facilitate other FFS (FAO, 2001).

Poverty alleviation, farmer participatory research and subsequent Small Farmer Group Associations (SFGA) are all important outcomes of FFS (FAO SD pages, 1998). Farmers' associations are better able to advocate for the local farmers' rights and provide market clout by increasing economies of scale (FIELD, 2002; Dilts, 2001).

The purpose of the study was to examine perceptions of leaders of IPM/FFS regarding factors that influenced group formation of IPM farmers' associations in the West Java Province of Indonesia. A demographics profile revealed that respondents completing the survey were Sundanese, elementary educated and alumni of FFS. Nearly a third of the participants were women. Low to moderate correlations, significant at the 0.01 level were found between social capital ($r = 0.242$), human capital ($r = 0.278$) and group formation. The knowledge category variables indigenous knowledge, new technology and trial and error experimentation showed a low correlation to the group formation variable "land rights." Gender, ethnicity, leader status,

and land holdings variables were all independent of group formation. However, significant differences existed between education level and group formation. The farmer leaders are eager to dialogue with the government based on findings in this study.

Measuring Learning in the Affective Domain Using Reflective Writing about a Virtual International Experience

Barry L. Boyd, Kim E. Dooley, and Summer Felton, Texas A&M University

Agricultural education undergraduate students lack knowledge and experience with international issues. Although “out-of country” experiences can improve understanding, they may be too expensive and time consuming for many undergraduates. The use of online simulations can be an effective alternative for providing an authentic international experience. Cognitive gains were documented, but what about a change in attitudes, beliefs, and values (the affective domain of learning)? As a part of a unit on international agricultural development, students were asked to view a simulation called, “Five Minutes in a Developing Country.” In the simulation, students assumed the role of a banana farmer in Peru with a family of four. Upon completion of the simulation, learners were asked to write a one-page reflection paper to describe their reaction to this experience. Content analysis techniques were used by the researchers to analyze students’ affective learning levels: receiving, responding, valuing, organization, and characterization. Through the use of reflective writing the researchers were able to recognize and determine that students did express affective learning at all levels of the original affective taxonomy.

Reinventing the Teaching Learning Process: Lessons from the University of the North

Thomas H. Bruening and John K. Boateng, The Pennsylvania State University
Naftal Mollel, University of the North, South Africa

A study was carried out to examine the teaching and learning methods used at the College of Agriculture at the University of the North (UNIN) and identify innovations needed to improve teaching and learning within the agricultural college of the University. The population for the study was composed of undergraduate students from their first, second, third and fourth years of study in agricultural sciences at the University of the North, South Africa. The study used a Likert scale of 1 to 5 to prioritize needs and attitudes of respondents. Respondents agreed that traditional teaching methods such as lecture and demonstration were frequently used at the UNIN ($M = 4.7$). They also agreed that teachers at the university used lectures too much ($M = 4.0$). Respondents agreed on the need for teachers to experiment with new teaching methods ($M = 4.21$).

Respondents agreed that they should be empowered to practice more of the methods that they are taught ($M = 4.2$). And that, improving the quality of teaching at the university should be a higher priority than anything else ($M = 4.7$). Regarding technology use, respondents agreed that teachers need to get additional training on using teaching models and equipment ($M = 4.3$). Respondents disagreed that teaching equipment used at the university was adequate ($M = 2.8$) and they agreed that teachers need to be trained in the use of new teaching equipment ($M = 4.2$). Results from the study should encourage teachers and administrators of the university to explore new teaching methods to engage students in active learning strategies in order to improve learning and transferability of skills.

Farmer Field School as an Effective Methodology for Disseminating Agricultural Technologies: Up-Scaling of Soil Management Technologies among Small-Scale Farmers in Trans-Nzoia District, Kenya

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Christopher A. Onyango and Faustine U. Ngesa F.U., Egerton University, Njoro, Kenya

This study was conducted to determine the effectiveness of the Farmer Field School (FFS) approach in knowledge acquisition, adoption and dissemination of soil management technologies (SMTs) among small-scale farmers in Kenya. Eight technologies were scaled-out using the FFS approach and conventional extension methods. A survey methodology with the ex-post facto research design was employed with a sample frame consisted of 940 farmers. A sample of 60 FFS graduates and 60 non-FFS (NFFS) farmers was chosen for the study. There was a significant difference ($P < 0.05$) in knowledge acquired in SMTs by FFS compared to NFFS farmers. About half of FFS farmers had acquired over 50% of the knowledge of all the eight technologies disseminated while the majority (>80%) of the NFFS farmers had acquired less than 50% of the same knowledge. About 44% of the FFS farmers had adopted 50% of the technology components while only 17% of NFFS farmers had adopted the same percentage of the technology components. The FFS participants were significantly ($P < 0.05$) better disseminators of SM technologies than the non-FFS farmers. While 54% of FFS farmers had moderate to high dissemination levels, 77% of non-FFS farmers had very low to low dissemination levels. It was recommended that all stakeholders in agricultural development in Kenya be sensitized on the potential effectiveness of FFS methodology in scaling-up agricultural technologies and also monitor how the application of knowledge acquired by FFS farmers is impacting on their livelihoods.

An Investigation of Effective Factors Involved in Perception of Wheat Farmers Regarding On-Farm Demonstration in Esfahan Township, Iran

Mohammad Chizari and Gholamreza Dinpanah, Tarbiat Modarres University

The purpose of this study was to determine the influence of on-farm demonstration on the wheat farmers' technical knowledge in Esfahan Township, Iran. Wheat farmers have been selected using stratified randomization method ($n = 381$). The comparison of two wheat farmers (visited and not visited), showed that technical knowledge of wheat farmers who visited on-farm demonstration was higher than who did not visit. The results obtained from the factors analysis reveal that the three following factors, social, farming and personal characteristics explain 68.072% of the variation of the wheat farmers' technical knowledge.

An Assessment of the Hybrid Rice Program in the Philippines as Perceived by Farmers

Dario A. Cidro, PhilRice, Philippines
Rama B. Radhakrishna, The Pennsylvania State University

Rice is the main staple food for about 75% of the population in the Philippines. Over the years, the Philippines have made tremendous growth in rice production and productivity through its Hybrid Rice Program. Despite these efforts, there is still a need to improve rice production to meet the demands of the growing population. By the year 2025, the country will need 40-50% more rice than what it needs today. The promotion of hybrid rice is a challenging and time consuming task. This study assessed the Hybrid Rice Program as perceived by farmers. The

assessment included performance of: 1) local government units, 2) regional office of the DOA, and 3) the private sector. In addition, current promotional program efforts were also assessed. A random sample of 257 farmers in the province of Isabela responded to a five-section survey instrument. Data was collected by personal interview method. Findings indicated that farmers were positive about the performance of the Hybrid Rice Program. They rated local government units as best, followed by the regional office of the DOA, and the private sector. Current promotional efforts were also viewed as good by the farmers. Strategies for improving the Hybrid Rice Program included sustaining the existing sectors (LGUs, private sector, DOA), coordinating joint efforts between LGUS, DOA, and the private sectors, conducting research to develop pest and disease resistant varieties of rice, increasing financial assistance for farmers, and providing professional development opportunities for extension agents to carry out hybrid rice promotional activities.

Evaluation of Illustration-based Educational Materials in El Salvador, Central America

Camilo Cornejo, Dorota Z. Haman, and Nick T. Place, University of Florida

While the use of printed materials containing illustrations is now less common in developed countries, its use is very important in developing countries, due to economical and technological constraints. However, educational materials used in extension programs in developing countries are usually prepared without taking in consideration the special characteristics of the local audiences. Those characteristics include language, gender, race, educational level, and other cultural factors that may affect the interpretation and understanding of the information transmitted through the educational materials. In this project small farmers in El Salvador-Central America, were questioned about their understanding of illustration-based educational materials. The findings show that the presence of text, color, and knowledge of the subject affect the interpretation of the illustrations by the farmers. Gender, educational level, and other socio-cultural characteristics affect the interpretation of the illustration-based materials. The importance of the evaluation of educational materials is confirmed, so the majority of the target audience understands them. The evaluation of these illustration-based materials was conducted to show the importance of including cultural factors in the development of materials based on ontology.

Requisite Characteristics of Higher Agricultural Training Programs and Graduates in Swaziland as Perceived by Stakeholders

Marietta P. Dlamini and Barnabas M. Dlamini, University of Swaziland

A descriptive survey study, employing Nominal Group Technique and personal interview was conducted, to determine requisite characteristics of higher agricultural training programs and graduates for sustainable development in Swaziland. Findings revealed that programs' approach to teaching need to: encourage more of learning, with students being the center and, use problem solving; promote practice of commercial agriculture; and, culminate care for the rural populace and, their environment. Educators should have vision; be conscious of quality training and, relevant content; should serve as role models for both enrolled and prospective students; and, should demonstrate leadership skills. In relation to design of the curriculum, respondents suggested that ICT be made a priority within teaching and learning and, approaches in preparing students must include self-employment, incorporating enterprise experiences; and, students must be encouraged to identify and secure funding for their research project from work sites. Linkage

with the agricultural businesses was identified needed, for the purpose of teaching industrial aspects of enterprises and, for assisting students for possible placement for internship and for employment. Discrepancy and weighted scores showed six areas of characteristics that agricultural graduates must possess. The characteristics were in the following rank order: personal attributes; professional qualities; business and economics knowledge; communication ability; application and, agricultural experience. Small differences of no significant importance or practical value were found among groups of respondents using inferential statistic of t-test, ANOVA, and Cohen's (1988) descriptors of effect size. Thus, group affiliation and background characteristics were interpreted not confounding the findings of the study.

Effectiveness of Extension-Research Linkages in Volta Region of Ghana

Prosper Kwesi Doamekpor, The Pennsylvania State University

A descriptive research design was used to study the effectiveness of research and extension linkages in the Volta Region of Ghana. An assessment of the research-extension linkage activities in the region indicated that attendance at farmers' day celebrations, mini-demonstrations, on-farm trials and joint diagnosis of farmers' situation were among the highly ranked activities by research scientists and extension agents as closely bringing farmers, extension agents and researchers together. However, joint priority setting and planning exercises which are activities the RELC undertakes were ranked low because prioritization of problem and needs of farmers at the zonal level ignored certain pressing needs of farmers at the district level. Problems perceived as hindering the research-extension linkages were differences in policy directives because research and extension belonged to separate ministries inadequate funds for to carry out research-extension linkage activities and inadequate meetings between field extension agents and researchers to plan joint activities for collaborative work. Inadequate training of field extension agents continues to be a problem as shown by the wide educational gap of participants of this study. The issue of communication should be looked into for personnel who play the linking role between research and extension. These include the SMSs and RELC coordinators who should be trained in basic extension communication and methodology for effective communication with the actors in the Agricultural Knowledge and Information System.

Assessing the Benefits of Two Farmer Field Schools Recently Conducted in Trinidad and Tobago

David Dolly, University of the West Indies, Saint Augustine, Trinidad and Tobago

Following major initiatives, two Farmer Field Schools occurred during the period August 2003 to September 2004 in the Caura Valley in North Trinidad, West Indies. This paper assesses these schools according to six key issues of Owens and Simpson (2001).

A study recorded many observations during the conduct of the schools. The researcher surveyed a population of 24 participants and 16 non-participants. These were a census of active producers who responded during a two week period after the second school. The area had a recorded population of 70 small producers of which 45 were active. The study further conducted focused interviews with six participants.

The school has relevance and responds to local concerns (Key1). The school engaged a useful participatory mechanism which generated new knowledge regarding crop husbandry practice in the area (Key2). Information flows and farmer to farmer participation were usefully productive (Key3). This was despite an observed female gender barrier in communication and an

often reluctance of some community members to share information. There is a new sense to build useful organisational relationships (Key4). Relationships between Scientists, Extension Workers and Farmers improved (Key 5). The FFS can be integrated into existing programmes but would need more administrative support and funding (Key6).

FFS participants had a lower mean average age and farmed in the Caura Valley for a shorter period of time (on average) than non participants. Participants worked less hours on the farm than their non participant counterparts. Reported mean monthly farm incomes and expenditures were higher for the participants than the non-participants. Most members of both groups did not keep adequate farm records. Likewise the farmers do not generally seek advice from expected sources.

This assessment revealed more qualitative benefits pertaining to improved farmer capacity, more appropriate and environmentally friendly crop production practices, better collective action and an effective support system which integrates many stakeholders. The study recommends a further assessment of quantitative benefits which could determine adoption and diffusion rates and cost effectiveness. This analysis is possible as more schools are conducted throughout Trinidad and Tobago and the rest of the Caribbean.

**The Perceptions of Farmers, Students, and Faculty Regarding University-based Extension:
A Case Study from EARTH University, Costa Rica**
Steffany L. Dragon and Nick T. Place, University of Florida

This study is in response to issues of sustainable development among small-scale farmers throughout Latin America and the Caribbean and specifically of importance within Costa Rica's agricultural extension system. This study is set within the context of two broader issues: the situation of small-scale farmers in Costa Rica that corroborate the need for Extension and the imperative to improve Extension services to these farmers. Through a "Work Experience Module" (WEM), student agricultural engineers and EARTH faculty act as change agents and work with local farmers to implement innovations such as an Integrated Agricultural System (IAS). The purpose of this study was to evaluate the Work Experience Module according to: 1) the perceived roles of the participants (farmers, students and faculty) in the module and 2) farmer adoption practices of components of an IAS. The design of this study is a formative evaluation in the form of a mixed-method, correlational case study. The researcher used the same instrument to serve as both a structured interview guide to collect data from farmers, and a census survey to collect data from students and faculty involved in the WEM in 2004. Focus groups were also conducted with the farmers and students during the final stages of data collection. Many positive aspects of the module have been identified by its participants including the role of the students as: a means for cultural exchange; motivational factors for farmers to learn new skills; access points to information, research and expertise at the university; and other social benefits. Some interesting opportunities for improvement were revealed and participants identified effective and ineffective aspects of the module along with their suggestions.

Micro Finance Support to Rural Women Farmers in Ghana: A Case Study of the Ga District of the Greater Accra Region, Ghana

Dorothy A. Effa and Don R. Herring, University of Arkansas

Micro finance (MFI) has developed as a vital move toward the promotion of community development and poverty alleviation goals through provision of small loans to low income individuals, households and enterprises. An Ex Post Facto non-equivalent comparison design was conducted to examine the impact of MFI on the livelihood of rural women. The findings show that rural women who participated (clients) in the MFI program gained an increase in income and savings compared to those who did not participate (non-clients). Clients adopted agricultural innovations at a significantly higher rate than non-clients. Lack of information was identified as a major hindrance to non-clients. The study recommended that Extension Services in collaboration with NGOs should develop an educational and information program on MFI support in order to disseminate needed information to as many people as possible.

How Do Students of Agriculture Perceive Globalization and International Involvement?

Curt Friedel, Tracy Irani, and Nick Place, University of Florida

The rising level of global integration has made it necessary for college students to have international experiences. If international experiences are an innovation to learn the skills necessary to be successful in our global society, then we must study students' innovation-decision process to increase the likelihood of students participating in these programs. The innovation-decision process involves students making a decision based on initial knowledge of an innovation and then forming an attitude toward that innovation. Although much research has been conducted to determine the level of knowledge college students possess in the realm of international events and those effects on agriculture, little research has asked students their perceptions of globalization and international involvement. In this qualitative study, 122 students were asked to define globalization and define international involvement. Inductive analysis techniques were used to analyze data by identifying salient domains and finding themes that emerged across domains. Salient domains of the term globalization included a process of unification and worldwide business. Salient domains of the term international involvement included a degree of collaboration and government policy. The researchers concluded that more research is warranted concerning students' decision to participate in international internships, experiences and study tours. The researchers also concluded that the inductive analysis technique is an effective method for faculty of other universities to determine the perceptions of students within their department.

Strategy to Empower Disadvantaged Blueberry Growers and Farm Workers through a Techno-Social IPM Training Curriculum

Anamaria Gomez-Rodas, Carlos Garcia-Salazar, and John C. Wise, Michigan State University

Blueberry production is a high-risk endeavor requiring knowledge and skills. The implementation of the 1996 Food Quality Protection Act (FQPA) (Public Law 104-170) (1997) further amplified this risk by eliminating and/or restricting many of the conventional insecticides relied upon for fruit production. However, successful implementation of the FQPA is highly dependent on comprehensive pest scouting services. Thus, we developed an IPM Scout training program with a bilingual technical curriculum alongside a "Cap Stone" social framework

program replicable in other regions with other crops. This program set the stage for the successful transition of the blueberry industry to environmentally friendly production practices, providing the means for empowerment for disadvantaged growers and farm workers through job opportunities and awareness of pesticide health hazards.

Our Blueberry IPM Scout training program provided disadvantaged growers and farm workers with risk management skills necessary to succeed in their business and agricultural endeavors and provided Michigan's blueberry industry with newly trained IPM scouts. Nine Latinos are self-employed and the IPM scouting skills for 20 employed trainees were enhanced. The "Cap Stone" component enhanced the social skills of disadvantaged blueberry growers and farm workers. Thanks to our training program the silent minority of the past now voices concerns and needs of Latinos and disadvantaged growers and farm workers. Finally, there are already four training programs developed after our model; apple, peach, cherry and grape IPM scout training programs offered at different places in Michigan. Ultimately, our goal is to integrate more crops with the same model.

Enhancement of Coordination of the Partnership among CSREES, 1862, and 1890 Institutions

Benjamin Gray, Terrence Thomas, and Victor Ofori-Boadu
North Carolina A&T State University

The Cooperative Extension Service must continue to evaluate and enhance all aspects of the System, including the partnership/relationship which plays a critical role in maintaining this national education network. Further, such an evaluation is essential if the CES is to remain on the cutting edge as a responsive institution. As such, the purpose of this study is to examine the existing collaboration and partnership among the CSREES and the institutions comprising the southern land grant system in order to improve the effectiveness of the Cooperative Extension System. More specifically, the study will identify the current status of collaboration and partnership between the CSREES and the 1862 and 1890 institutions, determine the level of satisfaction of the partnership arrangement, identify important weaknesses and enhancements of the partnership, and determine what factors are most important to the success of the partnership.

The preliminary findings show some important differences that exist between the land grant institutions and their feelings toward the partnership. Both 1862 and 1890 land grant institutions differ on their level of satisfaction with partnership activities involving the CSREES, as well as with each land grant institution. The data also reveal important differences in the factors that enhance the partnership such as the awareness of common interests, level of commitment to a quality program, turf protection, dedication to the program, and in the planning process as a contributing factor affecting the partnership

The Relationship of Willingness-to-Pay and Demographics for Agricultural Information Delivery Technologies: A Case Study from Rwanda

Sharon Haba, National University of Rwanda
Chanda Elbert and Alvin Larke, Jr., Texas A&M University

This study was designed to identify the factors influencing the willingness to pay for agricultural information delivery technologies among the farmers in the Abahuzamugambi Coffee Growers Cooperative located in Butare, Rwanda. Three hundred and six farmers responded to a questionnaire that included questions about their demographic characteristics and

accessibility to agricultural information technologies. Results were computed using the mean and standard deviation. T-tests and analysis of variance were conducted to determine the relationship between farmers' demographic characteristics and their willingness to pay for selected agricultural information delivery technologies. Findings indicate that there are some delivery technologies available to farmers who depend on technologies offered by the government. The findings also indicate that there was not a statistically significant difference between farmers' willingness to pay for agricultural information delivery technologies, length of time spent as a cooperative member, income derived from agribusiness and yearly expenses based on expenditures.

Understanding Farmers' Decision Making on Rice Pest Management: Implications for Integrated Pest Management (IPM) Policy in Bangladesh

Abdul Hamid and Derek D Shepherd, The University of Reading

Farmer decision making has increasingly been recognised as an important learning domain in the field of adoption and diffusion of farming technologies. This paper presents findings of a study on farmer decision making on the adoption of rice pest management practices and discusses implications for Farmer Field School interventions to influence farmers' to adopt Integrated Pest Management and abandon their heavy reliance on insecticides. In making adoption decisions on a rice pest management practice, farmers consider its demands on resources such as information, labour and time, and the returns in terms of higher yields and increased gross margins. They also assess pest management practices in terms of simplicity, convenience, security, and independent practice. With these criteria in mind, farmers in this study did not adopt Integrated Pest Management practices. In this context, compared with conventional insecticide use, Integrated Pest Management is seen as complex, inconvenient, less predictable, and dependent on neighbours practice. It also requires higher levels of resource, particularly labour, and achieves lower margins. Most farmers use insecticides, a few farmers use 'local' practices such as salt alone, salt with fertilisers or with grounded naphthalene and tobacco, and a very few farmers use nothing unless they observe a possibility of a serious yield loss. Farmers trained in Integrated Pest Management practices in Farmer Field Schools used the same amounts of insecticides as untrained farmers and were not doing anything differently from them. Farmer Field Schools, therefore, did not appear to have influenced farmers to adopt Integrated Pest Management. The study therefore raises the question of the validity of extending the intervention until greater consideration is given to understanding how Integrated Pest Management can fit the needs and local conditions of small holder farmers.

Water in Tanzania: A Role for Extension

Laura Hartstone and James Knight, University of Arizona

In an effort to examine household drinking water contamination, observations, interviews, and physical property tests were administered in the village of Olorien in Northern Tanzania during November 2004. Observations offered insight into behavioral incidence of polluting water resources. Simply not boiling water and using large containers for storage led to significant results of the occurrence of E. coli. Households with lower incomes were found to boil their water less than those with high incomes, which in return led to high incidences of E. coli contamination in low-income houses. It was also discovered that not a single sample contained chlorine which causes speculation that Arusha Urban Water Supply & Authority

(AUWSA) is not properly treating the municipality's water supply. Not only can original water sources not be trusted, but residents are in need of taking responsibility of caring for their supply. After the examination of one hundred houses in the village and twenty-two original water sources, it has been concluded that residents are in fact contributing to the contamination of their drinking water supply. With proper education of how to handle and store water carefully, residents can take control over their well-being and many lives may be saved.

**Beliefs, Attitudes, Perceptions, and Barriers toward International Involvement among
College of Agriculture and Life Science Students**

Tracy Irani, Nick T. Place, Curt Friedel, University of Florida

A study was conducted to assess perceptions of potential barriers that might affect students' perceptions and likelihood of participating in international learning at the University of Florida's College of Agricultural and Life Sciences. To conduct the study, an 89 item web-based questionnaire was randomly sent to a sample of undergraduate and graduate students. 256 responded, for a response rate of 34%. Results showed that the most relevant barriers toward participating included concern about financial costs and overall time involved. Their ratings of a set of attributes related to skills possessed by students involved in international activities was above average, while their rating of the degree to which they possessed the attributes was in the average range. Areas which showed a substantial difference between importance and possession of attributes included "knowledge of the humanitarian issues between the U.S. and other countries", and attributes relating to exports, marketing and humanitarian issues. Perceived barriers was the most significant predictor of intent and perceptions toward international participation, followed by the perceived degree of importance of a set of attributes typically possessed by students who have engaged in an international experience. Based on these findings, possible strategies that may enhance students' willingness to participate in internationalization efforts might include focusing on educating students about specific attributes that may result from international experiences, as well as publicizing and promoting those "student success stories" where this effect is illustrated. Further, another potential avenue may be to work on mitigating specific barriers that students may perceive they have.

It Takes a Village: Professional Practical Skills Education for Rural China

Bert Lynn Jones and Difei Shen, Iowa State University

The authors of this paper employed a qualitative descriptive study to investigate the enablers and barriers of providing "Professional Practical Skills" (PPS) education along with "Professional Technical Skills" (PTS) education to rural elementary school students in China based on the "It Takes a Village" (ITV) philosophy. Specifically, the authors conducted focus groups among teachers and students of Zhejiang rural elementary schools and students' parents as well. It is found that all students, teachers, and parents agreed in the importance of providing "PPS" education to rural primary school students and showed their willingness to contribute and participate in the study and potential subsequent projects. From the three main barriers, which are 1) traditional exam-orientated educational philosophy in China; 2) school being the only entity responsible for providing education; and 3) financial issues, the authors recommend a nonformal education format to provide "PPS" education along with "PTS" education. In addition, the authors recognized the importance of role identification among different education providers under the "ITV" philosophy. As a result, the authors recommend more research be

done from the perspectives of government and other social entities, so that some efforts can be made to facilitate the communications, understanding, and role identification among teachers, parents, students, and other social entities so that they will work together to provide “PPS” along with “PTS” education through the “ITV” philosophy.

Informal Technical and Vocational Training Programs (ITVTP) and Farming in the Province of Isfahan, Iran

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Since 1954, various informal training programs for farmers have been implemented to support them in several aspects of their life and careers in Iran. This study aimed at assessing the results of informal technical and vocational training programs (ITVTP) in the field of agriculture on the employment status of farmers in the province of Isfahan in Iran. A number of 330 farmers (equally divided over an experimental and a control group) were selected from 19 townships of the province mentioned to be interviewed. Structured questionnaires were completed during the interviews. The results show the education level of the majority of farmers in both groups is low; most of them are married, smallholder and more than 40 years of age. Statistical analysis showed there is a positive relationship between ITVTP (as an independent variable) and different aspects of the lives and careers of farmers (as dependent variables), such as job stability, job satisfaction and motivation, income generation, investments in the agriculture sector, information and competence, the employment of families, and production capacity of farmers. The findings underline the importance and supporting role of ITVTP for many factors relating farming.

Educational Needs of Rural Women in the Western-Azərbayjan Province of Iran

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The main purpose of this study was to assess the educational needs of rural women in the Western-Azərbayjan province of Iran. The research design of this study was descriptive-correlation and was carried out by a survey method. The target population of this study consisted of 335178 rural women in the Western-Azərbayjan in Iran. By multistage random sampling technique, 259 of the rural women were selected for the study. A four parts questionnaire was developed to collect data on the rural women’s personal characteristics, to assess the social and extension factors, to measure rural women’s felt educational needs and to identify rural women’s unmet educational needs. A pilot study was conducted to determine the reliability of the questionnaire for this study. A Cronbach’s Alpha reliability coefficient of 90.33% was achieved respectively for the instrument. The results indicated that the rural women had low knowledge and skills in performing production practices. This indicates that the General and Housekeeping topics had been stated as priority felt educational needs. Marital status, individual tribe, involvement in agricultural activities and participation in production decision-making process had a significant effect on rural women’s educational needs. There was a statistically significant relationship between size of field, number of livestock and rural women’s educational needs. Multivariate regression indicated that 39.14 % ($R^2 = .3914$) of the variance in the rural women’s educational needs could be explained by their marital status, participation in production decision-making process, contact rate with extension agents, access to urban areas and main job of

household head. This implied that there are other factors that may have contributed to variations in the rural women's educational needs that were not investigated in this study.

Attitudinal Variability among Southern High Plains Cotton Producers toward Integrated Crop/Livestock Systems

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Kelly J. Jones, Goddard High School

Matt T. Baker and David L. Doerfert, Texas Tech University

Sustainable agriculture is important for farmers nationwide, and especially farmers in the Texas Southern High Plains. Studies conducted in the Sustainable Agriculture Research and Education Program stress the need for sustainable agriculture; however, if agriculture is to move towards sustainability, sustainable practices must be adopted. Integrated crop/livestock systems were used as an indicator of sustainable behavior. Q methodology was utilized to discover the expected, unexpected, and diverse orientations towards sustainable agriculture systems. Fourteen cotton producers were interviewed to gain Q concourse statements. These statements were then put on Q cards and given to 23 cotton producers who were considered to be non-adopters of integrated systems. Varimax rotation yielded three factors. The first group, Forward Thinking Pragmatists, realized the need for sustainable agriculture systems, yet is hesitant to adopt due to skepticism of the economic implications. The second group, Optimistic Integrators, realized the need for sustainable agriculture systems, yet had not adopted because of a lack of education. The third group, Traditionalists, saw no future for sustainable agriculture. They are already sustainable in the fact they have switched from growing corn to growing cotton. Overall, research revealed optimism for future sustainable agriculture systems.

Defining Characteristics of Additional Farm Labour on Irish Suckler Beef Farms

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In very few occupations are the interdependence between the family and the business as strong as in farming. Almost all farm holdings in Ireland are family farms. Family labour is the dominant source of labour used on Irish farms. Thus, establishing the characteristics and motivation of the additional farm labour required on Irish suckler (cow-calf) farms, has significance in the use of farm labour. Data were collected from 115 predominantly spring calving suckler farms in Ireland with the objective of characterising the composition and use of farm labour and benefits received by the additional farm labour on Irish beef farms. It was found that farm spouses and farm children were the most common additional farm labour resource used, contributing an average of 10.5 and 7.5 hours per week to farm work respectively. Amongst the main challenges faced by respondents was the lack of interest in farming shown by respondents' children due to unsociable long hours associated with farm work, low return on labour and the stress factor. Larger farms were most likely to hire-in labour and hired-in part-time labour was most common in the large farm category. Most respondents obtained their hired labour locally and a majority of respondents felt that current wage structures were adequate. A range of non-financial benefits were received by farm workers which included meals, accommodation and the use of machinery in certain instances.

Readiness for Self-Directed Learning and the Cultural Values of Individualism/Collectivism among American and South Korean College Students Seeking Teacher Certification in Agriculture

In Heok Lee and James R. Lindner, Texas A&M University

The purpose of this study is to examine the relationship between self-directed learning readiness and the cultural values of individualism/collectivism in two sample groups drawn from different cultures. The target population for this study consisted of two sample groups: Korean and American students who seek teacher certification in the field of agriculture. Data were collected using a web-formatted questionnaire. Findings indicated that in a hierarchical multiple regression analysis, scores for the Self-Directed Learning Readiness Scale (SDLRS) ($R^2 = .03$, adjusted $R^2 = .01$, $p = .30$) in Step 1 was not statistically significantly related by gender, student classification, and GPA. However, scores for SDLRS ($R^2 = .34$, adjusted $R^2 = .30$, $R^2 = .31$, $p = .00$) in Step 2 was statistically significantly related by gender, student classification, GPA, nationality, vertical individualism (VI), horizontal individualism (HI), vertical collectivism (VC), and horizontal collectivism (HC). This model accounted for 34 % of the variance in the SDLRS (R^2 change = .31). More specifically, differences in the students' SDLRS can be best explained through HI, VC, and HC among the cultural values of individualism/collectivism.

International FFA School to School Linkage Program: Case Study of Two Families

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The National FFA Organization has been facilitating international experiences for its members for a number of years. One of these programs is the International FFA School to School Linkage Program (SSLP), in which selected American agricultural education programs are linked with specialized secondary agricultural lyceums located in one of the countries of the former Soviet Union (FSU). The program's main mission is for American students and teachers to share ideas with their FSU counterparts about the initiation and maintenance of small-scale agricultural entrepreneurship based on the United States' agricultural education Supervised Agricultural Experience Program (SAEP) model as well as exposing them to FFA leadership activities. During the 1997-98 school term, six agricultural education students and two adults from Prairie High School located in Prairie, Louisiana (pseudonyms), participated in the SSLP, linking with the Zolotoya Agricultural Lyceum in Zolotoya, Platnaya Region (pseudonyms), Russia. The families of the participants were highly involved in the entire experience. This qualitative study investigated "How have the lives of two Prairie High School, Louisiana graduates and their immediate families been affected by their participation in the 1997-98 International FFA School to School Linkage Program?" The major themes identified were: A) Intellectual Development/Career Guidance Choices, B) Developing International Perspective, C) Change in Perception of Host Country/International Representatives, D) Personal/Family Development, and E) Heightened Sense of Community. Developing an International Perspective, Personal/Family Development, and Heightened Sense of Community had the highest frequencies of reference. Overall, all participants found this to be a worthwhile and life-changing experience.

The Implementation of Educational Reform in Brazil's Agricultural Schools: A Study of Agricultural Teachers' Perceptions

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This study addressed the perceptions of Brazilian federally supported agricultural school teachers towards two concepts enforced by the reform of professional education in Brazil: the separation between academic and professional education and the modular competency based curriculum. Rogers' (1995) five attributes of innovations (relative advantage, compatibility, complexity, trialability, and observability), and Moore and Benbasat (1991) voluntariness of use were used as a framework for the study. The study used a two-phase sequential mixed model exploratory design (Tashakkori & Teddlie, 1998), collecting and analyzing both qualitative and quantitative data. A multinomial logistic regression model estimated the effects of the independent variables on the rate of adoption of innovations.

Rogers' (1995) five attributes contributed to explain 74.4% of the rate of adoption of innovations, but did not explain the non-adoption. Trialability was the only attribute that did not show statistical significance as a predictor of adoption. Moore and Benbasat's (1991) voluntariness of use did not contribute to explain the rate of adoption. Teaching experience was the only demographic characteristic that showed statistical significance in predicting the adoption.

Lack of training was the major limitation indicated by the teachers in the reform implementation process. The authoritarian manner in which the reform was implemented was incompatible with teachers' values and beliefs. Teachers perceived the reform as more complex than the previous situation. Competency based evaluation was the premier complexity factor. Teachers have also indicated that the reform has brought an extra load of work for teachers and students.

China Agricultural University Faculty Perceptions about Barriers to Diffusion of Web-Based Distance Education

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James R. Lindner, Texas A&M University

The purpose of this study was to investigate China Agricultural University faculty perceptions about barriers to diffusion of Web-based distance education (WBDE). Rogers' (2003) diffusion of innovation theory served as the theoretical base for the study. Quantitative research was employed and the research design was descriptive in nature. Results of data analysis found that respondents tended to perceive WBDE program credibility, administrative support, planning issues, technical expertise, financial concerns, concerns about time, concerns about incentives, infrastructure, conflict with traditional education, and fear of technology as moderate barriers to diffusion of WBDE. Age, level of education, academic rank, teaching experience, and distance education experience had no significant influence on faculty perceptions about the ten barriers to diffusion of WBDE. Professional area and gender had no significant influence on faculty perceptions about nine of the ten barriers. They, however, had significant impacts on faculty perceptions about concerns about time as a barrier.

Extension Strategies for a Changing World Begin with the End in Mind

Barbara G. Ludwig, Ohio State University Extension

Increasingly, extension and university professionals are being asked to organize international experiences and travel for groups of clientele, students or colleagues to increase their understanding of global issues, markets or interdependencies. These may be short travel experiences, a student study abroad class or a lengthy stay to work on a university or sponsored project. To create a successful international experience, the person responsible for the organizing must be something of a prophet, promoter, provider, politician and police officer. The five P's that support and ensure a successful international experience for all involved are explored. Introduced will be a web based International Extension Curriculum developed by a multi-state task force from Purdue, Florida A&M, Iowa State University and Ohio State University.

“What in the world are they thinking?” Perceptions of Extension Personnel Regarding Internationalizing Agricultural Extension

Lisa Lundy, Louisiana State University

Nick T. Place, Tracy Irani, and Ricky Telg, University of Florida

One of the many organizations dealing with the phenomenon of globalization is the U.S. Cooperative Extension System (CES). Initiatives are in process to internationalize extension with the goal of helping extension clientele prepare for life and work in an interdependent world. To equip CES communicators in effectively communicate the importance of internationalizing extension to extension personnel, the purpose of this study was to describe the attitudes and perceptions of extension agents with respect to initiatives to internationalize extension. Extension personnel throughout the United States were studied. A random sample was taken and 727 individuals responded for a 52.6% response rate. There were slightly more female respondents than male, with a mean age of 46.2 years. Most of the respondents were county extension agents. The majority of respondents indicate previous travel experience outside the United States. Respondents differed in their appreciation of the importance of internationalizing extension with respect to several factors, including gender, travel experience, and specialization. Based on the results of this study, CES communicators should consider developing targeted messages about internationalizing extension for different areas of extension, based on the needs of their clientele and their existing perceptions about internationalizing extension.

Undergraduate Students Perceptions of Internationalization and International Involvement Activities

Nadezhda N. Mamontova and Thomas H. Bruening, Penn State University

As the process of globalization became an integral part of today's world, the need to internationalize higher education is perceived by public and educational institutions as the major criterion of a quality education. Agricultural colleges have responded to the need but more efforts are required to internationalize agricultural education. This study was conducted to describe Penn State College of Agricultural Science undergraduate students' attitudes and perception toward internationalizing the curriculum. The research replicated a study conducted by the faculty of the College of Agriculture and Life Sciences at the University of Florida. Results showed that though the students realize the value of international experience, their actual experiences are limited. The college needs to find ways to create more opportunities for students

to integrate international content. Also, the curriculum content needs to be articulated within the college to adequately meet student need.

Effectiveness of Joint Extension-Research Plans Based on Perceptions of Extension Agents and Researches in Lorestan and Kermanshah Provinces, Iran

Reza Movahedi, Bu Ali Sina University
Mohammad Chizari, Tarbiat Modarres University

For improving agricultural extension, it is essential that we link research units and extension activities. In this regard, one of the approaches, which is carried out in Iran, is a joint research-extension plan (JREP). A joint research-extension plan involves a common farming activity planned by the researcher, the extension agent and farmers in which are examined the relevant research's results based on farmer situation accompany with extension agents and researcher's monitoring and guidance. Joint research-extension plans carried out by the ministry of agriculture are among those activities which establish linkages between research and extension personnel. These plans have started up since 1988 with the following objectives: Establishment of linkages between extension and research system, Orientation of extension agents and the researcher with the latest research findings, and Examination of the adaptability of research findings according to farmers' setting.

Student Perceptions of the Discussion Board and Centra™ Virtual Class in an Online International Development Course

Theresa Pesl Murphrey and Kelly Jett Murphrey, Texas A&M University

Too often the delivery of courses online begins with an attempt to replicate the traditional face-to-face classroom. As educators we are well versed on how to achieve meaningful learning in the traditional classroom, thus, it is only natural to try to duplicate classroom discussions in online classes. With this in mind, the discussion board and programs such as Centra™ virtual class were developed to fill the void that would have existed without them. In order to determine how online courses can be better designed and delivered in regard to achieving the results of discussion, this study evaluated student perceptions of the discussion board and the Centra™ virtual class technology used to deliver AGED 640 online and uses preliminary findings to propose possible solutions to meet this need.

Associations between Faculty Self-Perceived International Knowledge and their Perspectives on Strategies to Internationalize the Agricultural Curriculum

Maria Navarro, Texas A&M University and The University of Georgia

Curriculum internationalization is now accepted as a necessity in higher education. Participation of faculty is at the core of any successful endeavor, and the level of their international knowledge and experience may affect their ideas regarding what should be involved in the process. Traditionally, research analyzing the internationalization process only addressed the perspectives of the most internationally savvy and active faculty, therefore limiting the applicability of the information.

The purpose of this study was to analyze associations between faculty self-perceived levels of international and internationalization knowledge and participation, and their

perspectives on the relevance and status of internationalization at their institutions; the different academic program strategies that could serve as vehicles for the process; and the institutional strategies necessary to support faculty in their curriculum internationalization efforts.

To gather data, the researcher asked a census of undergraduate teaching faculty in the colleges of agriculture of two land-grant universities to respond to an on-line questionnaire with both quantitative and open-ended questions, and also conducted eight one-hour interviews.

This study found a significant positive linear relationship between faculty self-perceived international knowledge, and 1) perception of relevance of internationalization; 2) ratings of all of the academic strategies; and 3) ratings of some of the institutional strategies (recognition, time, funds, and collaboration). It did not find a significant relationship between faculty international knowledge, and 1) opinion on the status of internationalization at their institutions; or 2) ratings for the strategy concentrating on intellectual support.

An Examination of the Relationship between Profitability, Labour Efficiency and Scale on Dairy Farms in Ireland

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John McNamara, Kildalton Agricultural and Horticultural College, Ireland

Kevin O'Donovan, Moorepark Research Centre, Ireland

Dermot J. Ruane, National University of Ireland

As fostering competitiveness is a key aim within dairying and there is an increasing need to examine current performance and identify the determinants of economic efficiency. This study provided information on the income and labour-use of a sample of dairy farms representing the range found in the Irish dairy industry. The interrelationships that existed among income, labour-use and scale of enterprise measures were examined. Farm financial data and farm labour input data were collected from 57 full-time dairy farmers in the 135 – 1,500 x10³ litres of milk quota range (50 spring-calving herds and 7 spring/autumn- [mixed] calving herds). The study indicated that most economically efficient 20 % of spring-calving herds had a profit per litre of 17.9 cent and a profit per work hour of € 28.7. In contrast, the least economically efficient 20% of farms had a profit per litre of 12.2 cent and a profit per work hour of € 13.6. The comparable figures for the mixed calving herds were 18.1 cent per litre and € 27.1 per hour, respectively. The characteristics of the economically efficient spring-calving herds indicated that a more efficient management strategy was employed as measured in term of larger scale (herd size), increased production per cow and lower labour input per cow. The costs of the relatively high labour input per cow associated with the mixed-calving herds were offset by the premium price attached to this milk.

Steps of Market Research for Small Farmers

John M. O'Sullivan, North Carolina A&T State University

Market research is an essential component of successful marketing. Extension can help small farmers design and conduct market research. This paper describes two outreach education efforts in marketing. The first took place in Africa and uses the Farming Systems Research "sondeo" model. The second is in North Carolina and uses a self-administered questionnaire in a Farmers Market. The theoretical base for such efforts is reviewed first. Methods, results and implications are then shared. Both approaches are offered as practical and useable market research methods to help small farmers understand their customer base.

Farm Income and Sustainable Livelihoods in Ireland

James Phelan, National University of Ireland

There is a wide body of literature available on the welfare and incomes of farm households. In Ireland there has been a concentration on farm income as the most widely used measure of farm household well-being. With increasing diversity within the farming community and a rise in pluriactivity farming income as a measure of welfare is incomplete. Similar to other countries, household income is increasing in importance as the preferred measure. An examination of household incomes shows that farm households have increased their incomes in real terms similar to other sectors in the economy. However, the increase has not come from farm income, but mainly from income earned from off-farm employment. The percentage of income coming from the market place has declined significantly since entry to the European Union in 1973. While household income is currently the preferred method, a framework for assessing welfare based on a sustainable livelihoods/lifestyle choices approach may be more accurate in predicting whether farmers stay farming or whether they adopt different lifestyles. These changes in income sources have major implications for extension services as greater opportunities for increasing income lie outside of the farm gate rather than on the farm.

Internationalizing Extension: Benefits and Impact among Faculty, Students, and Stakeholders

Nick T. Place, Pete Vergot, III, and Steffany L. Dragon, University of Florida

An impact assessment was conducted to determine the benefit and change resulting from an innovative internationalizing extension training program (IETP). The program consisted of two introductory sessions, a ten-day onsite learning experience in Costa Rica and a follow-up reflection and planning session. Program participants included four Extension Agents, four county commissioners, four graduate students, one state Extension specialist, and two program coordinators. The purpose of this study was to determine the nature and magnitude of the professional and personal impact among Extension faculty, graduate students, and county commissioners that resulted from their participation in the Internationalizing Extension Training Program. In addition, other specific objectives were to determine how participants have incorporated the experience into their work, and; to determine aspirations and intentions related to internationalizing extension. In general, participants found the experience to enhance their world view and influenced many of them to stay internationally engaged at some level. Commissioners also commented that by participating in the IETP, they realized the impact that Extension has in Florida and the United States. As a result, they have supported increased funding for local Extension and its services. Graduate students gained an understanding of ways to implement international components into their future careers and the importance of international professional involvement. Participants felt strongly that the IETP was very valuable as Extension continues to change and adapt to the needs of local citizens, respond to the changing state demographics, and be a part of the national participation in international affairs.

The Influence of Distance and Full-time Training Programs on the Professional and Attitudinal Development of Teacher Trainees in Lesotho

S. Qhobela and G. H. Düvel, University of Pretoria

This paper investigates the professional and academic achievements of students in the distance and full-time training modes of teacher education at the Lesotho College of Education. The background to this investigation is that, although the distant training program has become essential due to the tremendous need for retraining and in-service training of teachers, its comparative impact has never been evaluated.

The investigation involved 434 respondents, representing a sample of 58% (250) teacher trainees studying by distance mode, and a 42% (184) studying full-time. Interviews were done by means of semi-structured questionnaires conducted in group interviews.

The findings confirm significant differences between the programs as far as impact is concerned, but do not necessarily imply that the distance program is inferior. This may be the case as far as grades of students are concerned, but distance students showed better professional development, and although they did not have the same degree of attitudinal development, their initial attitudes were significantly better

An Assessment of Vocational and Technical Higher Education Effect on Employment in Agriculture: A Case Study in the North Western Provinces, Iran

Gholamreza Pezeshki Rad and Mahnaz Mohamadzadeh Nasrabadi, Tarbiat Modarres University
Thomas Bruening, Penn State University

The world is moving towards an information-based economy. Vocational and technical higher education is directly concerned with acquisition of knowledge and skills required for the world of work, formal and informal, urban and rural. The purpose of this study was to assess the affects of vocational and technical higher education on the employment in the agriculture sector. The research method employed was correlative-descriptive. The population consisted vocational and technical higher education graduates ($N = 215$) at the vocational and technical higher education institutes in the North Western Provinces in Iran. Results showed 41% of graduates were unemployed, 11.4% were employed fulltime and 32.4% of graduates were employed part time. About 13% of graduates continued their education. More than two thirds (77.5%) of employed graduates held jobs in agricultural sector and 22.5% were employed in non-agricultural sector positions. Employed graduates indicated vocational and technical higher education prepared them for careers in the agricultural sector. Unemployed graduates stated that limitations in job opportunities in the agricultural sector were the main barriers to employment. According to the study findings, there was a significant positive relationship between infrastructure, teaching ability of educators and trainers, teaching methods and educational content with graduates' job ability.

Effectiveness of Rytu Mitra: An Innovative Farm Telecast Program in Andhra Pradesh

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Information is a critical input in agriculture and the farmers are information hungry. The role of electronic media to educate the farmers on modern agricultural practices in a sustainable manner is imminent. To disseminate information without transmission losses, electronic media play an important role. The only Agricultural University in the Andhra Pradesh, Acharya N.G. Ranga Agricultural University (ANGRAU) has taken a lead in exploiting Information Technology for the benefit of farming community particularly under the distance education mode. An Electronic Media Wing was established during 2001 with five multidisciplinary scientists to promote e-extension by the ANGRAU in collaboration with the Department of Agriculture and launched an innovative farm telecast program 'Rytu Mitra' through a private cable channel Teja w.e.f 06-08-01. The program runs for one hour daily between 6.00 to 7.00 PM on all 365 days. The impact of any communication can best be judged by its effectiveness on the target group. Therefore an attempt was made to study the impact of Rytu Mitra. One hundred and Sixty randomly selected farmers from the Guntur and Mahabubnagar districts of Andhra Pradesh were interviewed personally to obtain their perceptions on the selected factors through a structured interview schedule.

It was observed from the study that majority of the farmers were viewing Rytu Mitra 3 to 4 times a week and perceived that audio quality of pre-recorded and Agricultural News program was average. They also perceived that the visuals used in Rytu Mitra were clear, simple to understand and relevant to the messages. Most of the respondents felt that the messages were telecasted at opportune time and received relevant messages to the ongoing farm operations. Regarding adequacy of information they felt that it was satisfactory. Majority of the respondents perceived that messages telecasted were clear and practicable to their fields. However respondents suggested for change in telecast time, to improve quality in phone-in-session, to be telecasted on Doordarshan instead of Teja Channel and to introduce success stories by progressive farmers to further improve the quality of Rytu Mitra program.

Extension: Facing Current and Future Realities or Else

John G. Richardson, North Carolina State University

Public funding for extension work is facing critical analyses by policy makers and others as to its relevance and worthiness for continued funding. Program impacts are expected to play a strong role in supporting the case for continued funding when serious competition for public resources is at stake. This paper focuses on a case study of a potential budget cut and removal of public funding support for Cooperative Extension in Mecklenburg County, North Carolina, during public budget hearings in 2004. Due to failure to have a strong record of accomplishments in that county, the county government ultimately eliminated some program components of the extension program. The value of communicating impacts and the worthiness of extension is underscored by a high-ranking Idaho State Legislator who explains in a testimonial herein how extension programs can produce major public benefits. The paper ultimately reflects on the propensity of extension workers to fail to recognize real program impacts, which leads to potential inability on extension's part to defend its budgets until it is too late.

The Thai Nguyen Farmers' Training Center: Catalyst for Grassroots Transformation

Joshua Ringer, Mulhall, OK

The agricultural extension system of Vietnam has played a key role in reducing poverty in Vietnam over the last decade. To further reduce poverty and malnutrition, marginalized communities in the northern upland areas must be positively engaged. This has been difficult to do in the past. Grassroots development in the uplands can occur when four major themes are addressed. The disconnect between the extension system and the poor must be bridged. Secondly, the focus must be on people and not programs. Thirdly, participation must involve farmers from planning to evaluation. Finally, change is occurring rapidly in the 21st century and marginalized farmers are affected by this. Marginalized communities are best served when they have been assisted in developing decision and adaptation strategies that enable them to control their own development.

This paper shows how the Thai Nguyen Farmers' Training Center (TNFTC) is a valid tool in empowering marginalized farmers. The TNFTC has achieved great success in Thai Nguyen Province in the last five years by focusing on bridging the disconnect between agricultural service providers and upland minority farmers. This disconnect has been bridged by focusing on people and their needs. This people focus brought about participation at the village and district level. The most promising sign has been that although material success has been seen, the greatest impact has been in the development of a new consciousness by the poor farmers themselves.

Extension Reform: The Challenges Ahead

William M. Rivera, University of Maryland, College Park

Gary Alex, Consultant, USAID

This article draws on the workshop and the case-study findings produced under the aegis of the 2002 Extension Workshop hosted by the World Bank, USAID and the Neuchatel Initiative. We highlight three general observations, summarize twelve main findings, and discuss a number of future challenges to extension and rural development. We note in particular that changes in funding, management, and delivery of extension services reflect a new vision of extension as being the ultimate responsibility of the client (the farmer) based on a set of new creative partnerships among government, the private sector, and civil society for service provision, and that the current stage of extension's transformation is from innovation to execution.

Research, Education, and Extension Linkages: An Analysis of Institutions in Developing Countries

Hassan Sadighi, Tarbiat Modarres University

A variety of theoretical models have been developed to show the interface between agricultural research and extension. The linkage between the parts of technology generation and technology transfer in a national agricultural system often involves more than two partners. It is desirable that these institutions would have a network of local influence through establishing research and extension stations and sub-stations, and defining the specific functions of research and extension to be conducted by these institutions. Farming systems research and extension and on-farm trials are considered the important techniques to link research and extension in these

institutions. Partnerships, built on mutual trust and respect, are a key component in the development and delivery of successful research, education and extension programs. The linking of research, education and extension, along with input from producers, results in more relevant programs and more efficient utilization of resources. Research, education and extension agencies recognize that by working together their efforts result in win-win situations rather than win-lose situations. The purpose of the study was to examine the linkages between research and extension in agricultural higher education institutions in developing countries. Selected countries were chosen for the linkage analysis. An in-depth content analysis conducted on secondary data obtained from the selected countries. Qualitative method was used to make judgment and characterization on efficiencies and effectiveness of the institutional linkages. This paper has presented evidence from seven countries of the diversity of agricultural research–extension linkage systems prevalent around the world. This diversity is the result of contrasting sociocultural situations and the different development models adopted by different countries.

Entrepreneurship and Agricultural College Students: A Case of Shiraz University

Maryam Sharifzadeh and Gholam Hossein Zamani, Shiraz University

Entrepreneurship is widely considered as a means to economic development and employment growth. A key to this link is the extent to which students pursuing higher education have psychological traits associated with entrepreneurial action. The review of literature identified four major psychological traits associated with entrepreneurs: need for achievement, need for power, competitiveness and risk-taking. The research reported in this paper measures the entrepreneurial traits of students at the Agricultural College - Shiraz University, and relates these traits to the discipline the students chose to study, and whether they are sophomores or seniors. A stratified random sample of students completed a questionnaire containing measures of entrepreneurial traits. The results reveal that there is no significant difference between students as far as their study area (discipline) and their level of education (sophomore/senior) concerns. The findings suggest a need to expose university students to entrepreneurial thinking, and how to identify and support the relatively small proportion of students who display traits associated with entrepreneurial behavior.

Internationalizing the AG 450 Experience: Student Farm Managers

Charles R. Steiner and Greg Vogel, Iowa State University

Experiential learning is an integral component of agricultural and extension education. The time and resources necessary to develop a truly experiential learning experience continues to be a limiting factor to its acceptance and use. Research on a truly experientially based course for senior level undergraduate students has been completed to examine the benefits associated with experiential learning and the connection with adult learning principles and theory. The Agricultural Education and Studies course (AgEdS 450) farm management and an operation at Iowa State University involves senior level students managing a viable farming operation. A discussion of the course, experiential learning, and survey data results from students enrolled in the course are included in the paper. The goal of this paper is to increase awareness of the benefits and opportunities experiential learning can provide related to learning about farm business management in the hopes of expanding the concepts globally.

Leadership Mentor Selection, Developmental Stages, and Personal Leadership Development

Sharon K. Strouse, The Ohio State University
Christopher M. Sieverdes, Clemson University
Ute Sibylle Hecht, University of Ulm, Germany

This paper reports on the nature of non-family leadership protégé-mentor relationships as reported by 110 college students. The study illustrates that mentoring plays an important role during teenage and young adult years. Mentors reflected upon by the college student protégés were predominately male, with more than half being family friends or coaches. Male protégés predominantly self-selected male mentors while female protégés equally identified male and female mentors. Using two major data sources, a leadership mentor essay and student survey, analysis illustrates the perceived value of the protégé-mentor relationship. Success in life, and specifically success in college as part of career preparation, draws on past experiences and relationships. Self-discovery and reflection by protégés upon their past mentor relationships are critical components of decision making for career preparation. Over one-third of the college students surveyed have identified new mentors associated with their college experience. These students are building on their past mentor relationships as they enter a new protégé-mentor relationship cycle. Examination of mentor selection as related to gender preferences and culture differences is recommended. Further study to explore the applicability of formal or informal mentor relationships in other cultures or as international experiences among college students is needed.

Extension Strategies for Poverty Alleviation: Lessons from China, India, and Egypt

Burton E. Swanson and Mohamed M. Samy, University of Illinois at Urbana-Champaign

This paper highlights the transition from a national extension system focus on production-oriented agriculture and food security during the last half of the 20th century toward an emerging focus on supplying urban consumers with higher-value products within an increasingly integrated global economy. Although most developing countries now have food surpluses, many nations have not solved the problem of rural poverty and hunger. It is now being recognized that “hunger is not a food problem, but a money problem.” Therefore, if national research and extension systems are to address rural poverty, then they must reallocate some programmatic resources from “increasing food production” to “increasing rural incomes and employment.”

This paper draws lessons from China, India and Egypt as these national extension systems have directly or indirectly addressed the problem of improving farm incomes and rural livelihoods. The lessons learned from these experiences suggest that three major institutional and/or programmatic changes are needed to enable extension to effectively alleviate rural poverty. First, both research and extension will need to refocus some of their program resources toward higher-value, labor-intensive crops/products that are specifically designed to increase farm income and rural employment among the rural poor. Second, for small-scale producers to effectively serve urban and/or foreign markets, they must get organized into groups (social capital) to achieve economies of scale and become linked with “supply chains” that serve these markets. Third, to enable extension programs to become more farmer-centered and market-driven, extension planning and management must become more decentralized.

Food Safety Research and Outreach: The Importance of Information Sources in Educating Consumers

Terrence Thomas, Kofi Adu-Nyako, Benjamin Gray, and Victor Ofori-Boadu
North Carolina A&T State University

Recently, incidents of food borne illnesses have raised concerns about the safety of the food supply. Consumers' food handling behaviors, particularly their mishandling of food has been associated with many cases of food borne illnesses. The concerns about the rising number of cases of food borne illnesses have resulted in several noteworthy efforts to educate consumers about proper food handling techniques. This study reports on factors that predict consumer awareness, source of information on safe food handling practices and the level of actual practice of safe food handling procedures. Results would seem to indicate that knowledge is necessary but not sufficient to produce behavior change. Therefore, extension educators should emphasize not only educating food preparers in safe food handling techniques but also to convince them of the importance of applying these principles.

The Lessons Learned and the Present Prospects: A Critical Review of Agricultural Education in Thailand

Pongpan Traimongkolkul and Prasong Tanpichai, Kasetsart University, Thailand

Thailand is one of the Asian leading food exporters. Evolved over a century, agricultural education has been instrumental to agricultural development of the country. With the on-going movements in educational reform and renewed direction of agricultural development, there is a need to holistically examine the system of agricultural education in Thailand.

This nationwide study reviewed the past and examined the present prospects of agricultural education at three levels: basic education, vocational education, and higher education. The research methods include an extensive documentary analysis, an empirical analysis with surveys and case studies, and reflections from opinion leaders.

Contemporary era of agricultural education in Thailand began in 1943 with an establishment of the first university specialized in agriculture, inspired by the US land-grant model. Stimulated by the green revolution of the 1960s-1970s, agricultural education during that period expanded rapidly to meet the nation's demand for manpower and technology. Aside from the success on this primary role, critics have pinpointed the side effects of agricultural education on small-scale farmers.

The strength of Thai system of agricultural education lies in its comprehensive and diversified structure, a result of resource accumulation over the booming period. At present, the existing system is being questioned on its relevance. Higher agricultural education, being the spearhead of the system, has been a subject of criticism on "functional imbalance."

To be relevant, agricultural education in Thailand must be more responsive to the changing contexts of national development, keeping equilibrium of competitiveness and sustainability of Thai agriculture. It is imperative that a national forum on agricultural education must be formed, serving as a task force to revitalize the total system of agricultural education. Recommendations are given for strengthening of agricultural education at all levels. Enhancing linkage between formal and non-formal education is also recommended.

Internationalizing University of Florida IFAS Extension Professional Development and Institutional Building

Pete Vergot, III, Nick T. Place, and Steffany L. Dragon, University of Florida

The University of Florida/IFAS Extension Internationalizing Extension Project (IETP) focused on the development and implementation of capacity building and institution building in international extension. University of Florida/IFAS Extension and important partners; locally elected County Commissioners and students and teaching faculty of educational departments in the College of Agricultural and Life Sciences (CALs), teamed up to assist in Internationalizing Extension in Florida.

The Internationalizing Extension professional development project was unique in that it brought representatives of local government, teaching faculty and graduate students together with county extension faculty to explore international extension possibilities in a collaborative manner. Extension in Florida is funded by federal, state and local county governments. The boards of county commissions are critical partners with University of Florida IFAS Extension, as they contribute over 30 million dollars annually to the overall extension budget. In addition commissioners make recommendations and decisions related to the local extension financial contribution.

Results from this study revealed a positive change in knowledge of international issues and effects of globalization of communities by the participants of the training program. The University of Florida IFAS Internationalizing Extension training program was enhanced by including partners of Extension, demonstrating the importance of involving extension agents, local officials, teachers and graduate students. The IETP's professional development and institution building activities, materials developed and papers/reports are posted on a special web site to use as an informational tool for participants and extension to use to teach future faculty and clientele.

Developing Training Modules for Improving Management Skills of Extension Professionals

K. Vijayaragavan, Premlata Singh, and Monika Wason, Indian Agricultural Research Institute

Agricultural extension in the coming years will have to go beyond the role of mere transfer of technology but get involved in new roles related to capacity building, team building, and institutional restructuring. Successful performance of new roles calls for skills of modern management. Studies have shown that the extension professional lack skills in different areas of management which are critical for their efficiency and productivity. The present study was undertaken to design and validate training modules for improving management skills of extension professionals. The training needs assessed through task analysis and self assessment revealed the following areas of training: planning, leadership, communication, teambuilding, creativity, decision making & problem solving, personal effectiveness, motivation, internet for extension, stress management, time management evaluation of programmes and performance appraisal. A set of 13 training modules covering each of the above area of management were designed involving the following steps: 1) Sequencing of skills/topics in each area; 2) Statement of learning objectives & expected outcome; 3) Formulation of instructional strategies to achieve learning objectives; 4) Development of instruction materials; and 5) Testing or validating of training modules. The results of evaluation of modules revealed that the modules had a significant positive impacts. The overall increase in knowledge of participants in different areas of management over pre-training knowledge was 221%. The training modules were also found to be highly relevant and useful to meet their training needs to improve their management skills in

different areas. They were also effective in improving their level of motivation and work productivity.

Preparing Market-Ready Graduates: Adapting Curriculum to Meet the Agriculture Employment Market in Egypt

John R. Vreyens, University of Minnesota
Mohamed H. Shaker, Cairo, Egypt

This study is designed to prepare a baseline survey of the skill gap between graduates' preparation to enter the labor force and the needs of prospective employers. The study surveyed 254 employers and 1,000 graduates from five faculties of agriculture in Upper Egypt. Employers ranked the importance of skills and level of competence of newly hired employees coming from the universities. Graduates ranked the importance of the skill in relationship to their current job as well as their perceived level of preparedness upon graduation. Cross tabulation revealed the skill gap. An analysis of the mode scores revealed the most critical skills required on the job compared to the level of preparation or competence. The results of this study will be used for adapting the curriculum for all five faculties of agriculture to ensure market ready graduates enter the current agricultural labor force of Upper Egypt with the skills required by the private sector.

Exploring Adult Youth Development Workers in the Process of Civic Youth Engagement in Trinidad and Tobago

Nicole Webster, The Pennsylvania State University
Wayne Ganpat, Ministry of Agriculture, Port of Spain, Trinidad, WI

The purpose of this paper is to explore the concept of civic youth development within the wider context of Caribbean youth, specifically in Trinidad and Tobago. It is important to understand youth development from this perspective given the critical social and developmental changes within the Caribbean. Eighty-two adult youth development workers from across the two islands were asked a series of questions on their knowledge and understanding of civic engagement, barriers to involving youth in community activities, and what they feel motivates youth to participate.

A Multidisciplinary Approach to Facilitate Change in Farmers' Psychological Coping Strategies when Dealing with Adversities: A Case Study in Southwest Iran

G. H. Zamani and Kiumars Zarafshani, Shiraz University, Shiraz, Iran
Marjan Gorgievski-Duijvesteijn, Erasmus University Rotterdam, The Netherlands
Masoud Yazdanpanah and Maasoomeh Forouzani, Shiraz University, Shiraz, Iran

Today's farming environment is highly competitive and typically provides a narrow profit margin. The additional onset of natural disasters and accompanying stress reactions does not make things any easier. Therefore, farmers must be able to acquire, interpret, and evaluate effective coping skills in order to survive. The paper reports on a stress management workshop that was conducted to increase coping skills of farmers during climatic hazards. Farmers in southwest Iran were trained to use systematic desensitization techniques to reduce psychological

symptoms of slow onset disaster such as drought. The paper concludes with some suggestions for addressing the some of the issues raised.

Association for International Agricultural and Extension Education
21st Annual Conference

San Antonio, Texas
May 25-31, 2005

Outstanding Professional Paper Presentations

Outstanding Paper Presentation

Micro Finance Support to Rural Women Farmers in Ghana: A Case Study of the Ga District of the Greater Accra Region, Ghana

Dorothy A. Effa and Don R. Herring, University of Arkansas

1st Runner-Up Outstanding Paper Presentation

The Lessons Learned and the Present Prospects: A Critical Review of Agricultural Education in Thailand

Pongpan Traimongkolkul and Prasong Tanpichai, Kasetsart University, Thailand

2nd Runner-Up Outstanding Paper Presentation

An Examination of the Relationship between Profitability, Labour Efficiency and Scale on Dairy Farms in Ireland

Bernadette O'Brien and David Gleeson, Moorepark Research Centre, Ireland

John McNamara, Kildalton Agricultural and Horticultural College, Ireland

Kevin O'Donovan, Moorepark Research Centre, Ireland

Dermot J. Ruane, National University of Ireland

3rd Runner-Up Outstanding Paper Presentation (tie)

Strategy to Empower Disadvantaged Blueberry Growers and Farm Workers through a Techno-Social IPM Training Curriculum

Anamaria Gomez-Rodas, Carlos Garcia-Salazar, and John C. Wise, Michigan State University

Outstanding Graduate Student Paper Presentation

Water in Tanzania: A Role for Extension

Laura Hartstone and James Knight, University of Arizona

Association for International Agricultural and Extension Education
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Outstanding Poster Presentations

Outstanding Poster Presentation

**Building Education Agendas for the Extension Service in the Republic of Moldova:
Changing the Approach**

*Oleg Stiopca, Republic of Moldova
Thomas Bruening, The Pennsylvania State University*

1st Runner-Up Outstanding Poster Presentation

Youth to Youth International Agriculture Ukraine: Phase II

Thomas Bruening, The Pennsylvania State University

2nd Runner-Up Outstanding Poster Presentation

**Farming Cooperatives for Subsistence Farmers in Zambezia Province, Mozambique:
Promising Practices for a Changing World**

Samuel Goff and James Lindner, Texas A&M University

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21st Annual Conference

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Outstanding Carousel Roundtable Presentations

Outstanding Carousel Roundtable Presentation

Planning for National Development – Exploring the Ws
Maria Navarro, The University of Georgia

1st Runner-Up Outstanding Carousel Roundtable Presentation

**An International Outreach Strategy to Counteract Budget Cuts: Sharing Curriculum for
Formal and Nonformal Education**
Arlen Etling, Susan Fritz, and Daniel Wheeler, University of Nebraska-Lincoln

2nd Runner-Up Outstanding Carousel Roundtable Presentation

**The Attitude of Agricultural Extension Instructors Regarding their Own Competencies in
the Teaching Process during Short-Term Courses for Farmers, Isfahan, Iran**
Mostafa Karbasioun, Wageningen University, The Netherlands
Mohammad Chizari, Tarbiat Modarres University, Iran

Association for International Agricultural and Extension Education
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AIAEE Award Winners for 2005

Outstanding Leadership Award

Dr. Wayne G. Ganpat, Training Specialist
Ministry of Food Production, Land and Marine Resources
Target Road
El Dorado, Trinidad, West Indies
E-mail: waygan@trinidad.net

Outstanding Service Award

Dr. Gary J. Wingenbach, Associate Professor
Texas A&M University
Department of Agricultural Education
2116 TAMU
College Station, TX 77843-2116
E-mail: g-wingenbach@tamu.edu

Outstanding Achievement Award

Dr. James R. Lindner, Associate Professor
Texas A&M University
Department of Agricultural Education
2116 TAMU
College Station, Texas 77843-2116
E-mail: j-lindner@tamu.edu

Outstanding Early Achievement Award

Dr. Charles R. Steiner, Lecturer
Iowa State University
Department of Agricultural Education and Studies
206 Curtiss Hall
Ames, Iowa 50010-1050
E-mail: csteiner@iastate.edu

Journal Article of Year Awards for 2004

The Editor requested *JIAEE* Board Members to review all articles published in Volume 11 (2004) and nominate articles for the third annual **Article of the Year Award**. The nomination period occurred in April 2005. Criteria for article selection and nomination were the article's capacity for "enhancing the *research* and *knowledge base* of agricultural and extension education worldwide..." Five truly outstanding papers were nominated.

The Editor asked the *JIAEE* Board Members and AIAEE leadership team members to review and rank the overall excellence of each article. Following are the results of this evaluation to promote the scholarship and recognition of authors who contribute to enhancing the *research* and *knowledge base* of agricultural and extension education worldwide.

Congratulations to all the authors on their scholarly achievements. Please take a moment to send your congratulations to these authors for their achievements and for helping all AIAEE members achieve prominence in the research publication process.

Outstanding Journal Article of the Year for 2004

Davis, K., Irani, T., & Payson, K. (2004). Going forward in education on agricultural biotechnology: Extension's role internationally. *Journal of International Agricultural and Extension Education*, 11(1), 25-34. Retrieved June 7, 2005, from <http://www.aiaee.org/jiaee/current/V11.1.25-34.pdf>

Runner-Up Journal Articles of the Year for 2004

1. Dlamini, M. P., Ngwenya S. S., & Dlamini, B. M. (2004). Reasons girls choose agriculture or other science and technology programs in Swaziland. *Journal of International Agricultural and Extension Education*, 11(3), 69-77. Retrieved June 7, 2005, from <http://www.aiaee.org/jiaee/current/V11.3.69-77.pdf>
2. Tuttle, S., Dooley, K. E., & Lindner, J. R. (2004). Men, women, and participatory delivery strategies for selected villagers in northeast Mexico. *Journal of International Agricultural and Extension Education*, 11(1), 61-69. Retrieved June 7, 2005, from <http://www.aiaee.org/jiaee/current/V11.1.61-69.pdf>

ASSOCIATION FOR INTERNATIONAL AGRICULTURAL AND EXTENSION EDUCATION

ANNOUNCES A CALL FOR PROFESSIONAL PAPERS

to be presented at the

22nd Annual Conference of AIAEE**“International Teamwork in Agriculture and Extension Education”**

Sheraton Sand Key Resort, Clearwater Beach, Florida

May 14 through May 19, 2006

AIAEE will accept proposals for refereed abstracts of professional papers to be presented at the 22nd annual conference that relate to issues in international agricultural and extension education. Topics related to the 2006 conference theme of **“International Teamwork in Agriculture and Extension Education”** are encouraged, but all submissions will be given full consideration. Research, theoretical/philosophical theme-based or application-oriented papers will be considered. In order to submit and present a proposal, at least one author **must** be an AIAEE member.

Please share with your professional colleagues, whether at home or in other countries, about the opportunity to submit a proposal. Each **proposal** is limited to **no more than four pages** (title page and three pages of text) and **requires** the following information:

- 1) Separate **title page** with name(s) and institution(s) of each of authors; **for the lead author only**, include the complete contact information (address, telephone number, fax number, and e-mail address). **A current E-mail address is especially important.**
- 2) As a footnote on the title page, indicate if you are willing to have your proposal considered for a poster session, should it not be possible to accept it for one of the paper sessions. If this is accepted as a poster you must resubmit your proposal in the poster format of a single page. More information can be found on the “AIAEE Call for Posters.”
- 3) The summary should not exceed three double-spaced pages of text (1-inch margins all sides, 12-point, Times New Roman font).
- 4) Please follow the prescribed format when submitting proposals: (a) introduction, (b) purpose of the paper, (c) methods and/or data sources, **or** theoretical/philosophical themes (the problem or issues, with attention to the reasoning used), (d) results, products, and/or conclusions, and (e) educational importance, implications, and application.
- 5) **You must submit your proposal electronically** as a **rich text file** (.rtf extension) attached Tables should be included in the table format of MS Word.
- 6) In the event an author does not have access to a computer with e-mail capability so as to be able to submit electronically, please send four paper copies of the proposal to the address below. **The final paper must be submitted electronically.**
- 7) More than one proposal may be submitted.

The deadline for submitting proposals for papers is **Monday, October 3, 2005**. Please direct questions and send electronic proposals to: **Ms. Kelli Selby**, International Extension Coordinator, Purdue University, 615 West State Street, AGAD – Room 26, West Lafayette, IN 47907, USA; **E-mail:** cameronselby@purdue.edu, Phone: (765) 494-9831, Fax: (765) 494-9613.

“ABSOLUTLEY NO LATE PROPOSALS WILL BE ACCEPTED”

Each proposal will be peer reviewed by three respected agricultural and extension educators. The **lead author** of paper proposals will be notified in December of 2005 and paper specifications will be given to those accepted for presentation. **The page limit is 12 pages for accepted papers.** Presenters will be required to register for and pay the conference registration fee prior to the conference from the Web site at <http://www.aiaee.org/>

We encourage new members. Contact Dr. Tom Bruening, AIAEE Treasurer, thb2@psu.edu or download membership information from the Web site at <http://www.aiaee.org/>

ANNOUNCES A CALL FOR POSTERS

to be presented at the
22nd Annual Conference of AIAEE
“International Teamwork in Agriculture and Extension Education”
Sheraton Sand Key Resort, Clearwater Beach, Florida
May 14 through May 19, 2006

AIAEE is accepting proposals for refereed abstracts (to be presented as posters) relating to issues in international agricultural and extension education. Topics relating to the 2006 conference theme **“International Teamwork in Agriculture and Extension Education”** are encouraged, but all submissions will be given full consideration.

Purpose: To present visually a concept or idea that reflects innovative models of research, educational programming, or evaluation.

Poster guidelines: Posters should be printed on one continuous sheet of paper. Posters will be displayed on a flat wall service.

Maximum size: 48 inches wide x 42 inches high (120 cm wide x 105 cm high) **(new for 2006).**

Posters will be on display one entire day of the conference; presenters are expected to be present during the evening reception. Must be an AIAEE member to submit and present a proposal—see below for membership information. New members and graduate students are encouraged to submit proposals. Each poster proposal requires the following:

- **Title page** with name(s) and institution of each of authors; including complete contact information (address, telephone number, fax number, and e-mail address) **for the lead author only. A current E-mail address is especially important.**
- A **one-page abstract** (1-inch margins all sides, 12-point, Times New Roman font) that includes introduction, purpose of poster, major points or information to be shared, conclusions, and educational importance.

Awards are presented to the top three poster presentations. Criteria for judging include: Technical content or information; originality or innovativeness; creativity of presentation or ideas; Conveys message (easily understood); importance of topic; and general appearance (well planned design, easily read, neat and well constructed)

Submission deadline is October 3, 2005 (no poster abstracts will be accepted after this date)

Submit electronic copy of the proposal or more information to: **Dr. Nicole Webster**, Department of Agricultural & Extension Education, Pennsylvania State University, University Park, PA 16802 USA; **E-mail:** nsw10@psu.edu, Telephone: (814) 863-2695, Fax: (814) 863-4753.

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ASSOCIATION FOR INTERNATIONAL AGRICULTURAL AND EXTENSION EDUCATION

ANNOUNCES A CALL FOR CAROUSEL ROUNDTABLE DISCUSSIONS

to be presented at the

22nd Annual Conference of AIAEE

“International Teamwork in Agriculture and Extension Education”

Sheraton Sand Key Resort, Clearwater Beach, Florida

May 14 through May 19, 2006

AIAEE is accepting proposals for refereed abstracts (to be presented as carousel roundtable discussions) relating to issues in international agricultural and extension education.

Topics relating to the 2006 conference theme, *“International Teamwork in Agriculture and Extension Education”* are encouraged, but all submissions will be given full consideration.

Purpose: To present, using a written and oral format, abstracts of research, theoretical advances, or explanations of an issue for discussion.

Parameters: Carousel roundtables are small group presentations of abstracts. Each presentation is allotted 15 minutes; presenters will lead the carousel roundtable discussion three times to rotating groups. Copies of the one-page abstract should be available at the presentation. Presenters must be AIAEE members to submit and present a proposal—see below for membership information. New members and graduate students are encouraged to submit proposals.

Each carousel roundtable proposal requires the following:

1. **Title page** with name(s) and institution of each of authors; including complete contact information (address, telephone number, fax number, and e-mail address) **for the lead author only. A current E-mail address is especially important**
2. A **one-page abstract** (1-inch margins all sides, 12-point, Times New Roman font) that includes introduction, method, major points or information to be shared, conclusions or lessons learned, and educational importance.

Awards are presented to the top three carousel presentations. Criteria for judging include: effective communication of materials, logical rationale for major points, knowledgeable response to questions, skill in orchestrating discussion, contribution to knowledge base, management of time, and quality of abstract.

Submission deadline is October 3, 2005 (no carousel abstracts will be accepted after this date)

Submit electronic copy of the proposal or more information to: **Dr. Nicole Webster**, Department of Agricultural & Extension Education, Pennsylvania State University, University Park, PA 16802 USA; **E-mail:** nsw10@psu.edu, Telephone: (814) 863-2695, Fax: (814) 863-4753.

“ABSOLUTELY NO LATE ABSTRACT PROPOSALS WILL BE ACCEPTED”

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