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# The Role of Agricultural Colleges and Universities in Rural Development and Lifelong Learning in Asia<sup>1</sup>

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## ABSTRACT

*The paper expounds on the challenges confronting institutions of higher agricultural education (HAE) in the context of the significant role of education in alleviating poverty, especially in rural areas, and in light of the changing needs of rural areas and economies. Specifically, HAE institutions are called upon to initiate and lead in articulating a vision for the future that serves the needs not only of agriculture but also of all who inhabit the rural areas. They can step beyond their traditional role by merging forces with other stakeholders to enrich and support other levels of education with critical knowledge and information on agriculture and natural resources management (NRM), the latter being crucial in the pursuit of rural development, poverty reduction, and food security.*

*To perform an active and constructive role in rural development, agricultural universities need to adjust their programs to accommodate new topics, as well as teaching and learning models; forge new partnerships with schools, academia and rural space stakeholders; expand its representation in governance; and hold continuous dialogue with policymakers. Their extension services could include support to education for rural people that encompasses primary, secondary, vocational, and adult education. University-school linkages are perceived to be illustrative of a decentralized, democratic, and community-based response to rural development problems.*

*It is noted that universities can potentially become showcases of local traditions and knowledge, reflecting the regional, cultural, and ethical traditions of their society, as well as global movements and forces. In reinforcing their roles as contributors to a culture of learning and rural development, it is emphasized that HAE institutions need to engage more directly and more effectively in partnerships and dialogue with other local educational institutions and their surrounding communities. Findings of the ongoing IIEP-UNESCO/FAO program of research on HAE institutions in Asia are expected to provide information on how higher education institutions contribute to learning and rural development, and insights on how their strategic role in this field could be strengthened and further developed.*

## INTRODUCTION

While higher agricultural education (HAE) has contributed to the growth and modernization of production agriculture, it has often failed to adjust its curricula and management curricula to respond

to the changes affecting agriculture and the rural space. The focus has mainly been on providing education and services geared to the professional development of those responsible for agriculture and rural development.

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<sup>1</sup> Paper presented at the 15th Conference of the Asian Association of Agricultural Colleges and Universities, held in Nagoya, Japan on 27–30 September 2004.

Universities also have a direct role to play in poverty alleviation. The vast majority of poor people in developing countries live in rural areas and education is a key factor in helping to reduce the level of poverty. In this context, the relationship between higher education and rural development is becoming an important policy concern, particularly in countries where the revitalization of rural areas represents a critical challenge.

In the context of globalization and efforts towards poverty reduction, higher agricultural education needs to look beyond the provision of agronomists. Innovative HAE<sup>2</sup> institutions have managed to reinvent themselves in order to meet the changing needs of rural areas and economies. In this framework, providing services to the community – of which, support to basic education is a part – becomes an important focus.

### ***Local Approaches to Rural Development***

The discussion about higher agricultural education policies is related to rural development concerns. In the late 1990s, new thinking on rural development stressed concepts and approaches such as community participation, empowerment, and sustainable livelihoods in the broader context of poverty reduction (Atchoarena and Sedel, in Atchoarena and Gasperini, eds. 2003).

The development community is currently renewing its efforts towards rural development with fresh insights into the key factors that militate against rural development and poverty reduction. Many countries are drawing up poverty reduction strategies with the cooperation of involved sectors, and international funding is becoming available to implement these strategies.

A comparative review of contemporary ideas in rural development and education shows much convergence. Today, both domains are recognizing similar intervention principles, including:

- Focusing on poverty reduction;
- Recognizing the potential of indigenous knowledge;
- Promoting the use of participatory approaches;

- Emphasizing community involvement;
- Coping with the withdrawal of the state from direct support within the context of structural adjustment programs and liberalization policies;
- Adopting a holistic view of the development of the rural space;
- Preparing rural people for off-farm employment by building knowledge and skills capacity;
- Understanding the complementarity of urban/rural linkages;
- Developing partnerships with NGOs and civil society;
- Mainstreaming gender issues; and
- Focusing on HIV/AIDS issues.

The current attention to rural development and poverty reduction constitutes a real challenge to the providers of education and training, including universities. Unlike previous attempts to deal with rural development, the current view is that the “rural” is more than agriculture and that rural development concerns all those who live in the rural space and those in urban areas who have close links with rural activities and influences.

Beyond its traditional role, higher agricultural education has an opportunity, in cooperation with other stakeholders, to enrich and support other levels of education with critical knowledge and information on agriculture and NRM. This latter contribution can be of key importance in the pursuit of rural development, poverty reduction, and food security.

In the policy context of increasing decentralization, local development is receiving growing attention. Local development initiatives give community representatives the opportunity to work together to improve the local economy. In depressed areas, these initiatives focus on economic revitalization and sustainable growth. Local development strategies are often based on partnership and consensus-building in identifying development needs and launching economic development initiatives.

Among the key actors in such approaches focusing on the local economy and labor market, are the educational institutions, including universities.

<sup>2</sup> In this paper, the term Higher Agricultural Education institutions encompass universities, colleges, and other institutions of higher learning serving the agricultural sector in its broad sense including fisheries and forestry.

In addition to their traditional, universal roles of teaching and academic research, universities are increasingly expected to respond to the specific knowledge needs of local learners, and to be more accountable to local stakeholders. In this framework, HAE institutions have to address important challenges in relation to rural development and the provision of learning opportunities to rural people at large.

### HIGHER AGRICULTURAL EDUCATION AND RURAL DEVELOPMENT: THE CHALLENGE

In many developing countries, HAE is experiencing serious problems that impact on the quality of the education provided and bring into question the relevance of the programs offered. Issues of concern include inadequate funding, often-decreasing enrolment, poor infrastructure, the declining quality of research and teaching, low

faculty morale, and high graduate unemployment rates.

The past decade has seen considerable pressure on universities and colleges due to growing constraints on public sector spending. Often, this meant that increases in enrolments were not matched by commensurate increases in resources. In addition, universities have to find an increasing proportion of their resources through research contracts, with internal funds for research having often decreased significantly. This trend has led to more efficient research, teaching, and management methods such as maximizing class sizes, and minimizing any duplication in teaching across the institution. It also meant that the size of the faculty had to expand to reach some critical mass, often through merging with others (Yonggong and Zhang 2004). Similarly, many universities of agriculture enlarged their mandate to cover new areas, not always related to agriculture. Eventually, many faculties of agriculture experienced a considerable

**Table 1. Factors impacting on HAE quality and relevance**

HAE problem area	External factors	Internal factors
Weak national support for HAE	Decline in political influence of rural areas	Failure to make out a case for HAE to policymakers
Decreased investment in HAE by government and donors	Absence of national HAE policies and shift in donor focus to other development priorities	Inadequate lobbying by HAE leadership, and fragmentation of agricultural education
Declining standards in teaching and research, infrastructure; lack of staff incentives	Low level of financial support from government and political pressure to accept an increased number of students	Lack of creativity; expectation that government would cover all expenses
Isolation of HAE from the HE system	Remote location of HAE institutions	Failure of HAE administrations to adjust to multidisciplinary needs of a changing sector and to seek alliances outside HAE
Inbreeding in staff appointments	Absence of recruitment standards, or failure of appropriate agencies to enforce such standards	Lack of openness of HAE communities
Employer dissatisfaction with degree holder's knowledge and skills; high graduate unemployment	Reduction in public sector hiring	Failure of HAE to undertake market analysis; lack of contacts with potential employers and education stakeholders
Low-level of Information Technology (IT)	Inadequate funding	Lack of IT skills in leadership teams

erosion of their independence and, sometimes, identity (Van Lierop et al. 2003).

The profile of students entering agricultural programs has also changed. Students in HAE are no longer purely rural in origin or necessarily from a farming background. No longer is the student intake from among the best secondary school graduates. No longer is agriculture the first choice of many of those who pursue degree courses in agriculture. The urgency of “getting a degree” often swells the ranks of HAE but the impact of HAE graduates on agriculture or rural development is not necessarily strong.

These problems (Table 1) and others, are generally not being dealt with because of internal and external factors that include the declining political power of rural electorates, the impact of low prices for agricultural products, the demands of other critical priorities for development, and the absence of policies for higher agricultural education.

The crisis in HAE has been identified and debated in national and international settings but despite a plethora of exhortations and suggested solutions, change has been slow. The “new” conception of the agriculture sector is more inclusive, reflecting the use of off-farm resources in food and fiber production systems, recognizing consumer concerns for quality and food safety, and including the skills and technologies that integrate the physical farming part of the food chain with all the post-harvest human uses and impact.

HAE has a key role to play in ensuring that: a) critical knowledge and skills are imparted to teachers and students; and b) other rural development actors appreciate the role of agriculture and sustainable natural resources management, and the synergies involved in working together to build human resource capacity. HAE institutions have to act quickly to clarify their roles and missions, establish their legitimate place in the higher education system, and make the organizational and administrative changes necessary to make a meaningful contribution to both the professional and general stakeholders concerned with rural development. In this context, there is a critical need for HAE institutions to initiate and lead in articulating a vision for the future that serves the needs not only of agriculture but also of all who inhabit the rural areas.

### ***Providing Support to Rural Development: Implications for HAE Institutions***

Traditionally, universities, including agricultural universities, have focused most of their attention on national development through the two missions of research and teaching. Universities have often seen themselves as institutions to prepare graduates for national and international labor markets, and to address research problems. Academics have had to win national and/or international acclaim for the quality of their research and teaching, and this has sometimes been at the expense of making a greater contribution to local economies and communities. Only a small share of the university community appears to have developed strategies to contribute to the development of community education and to support local development.

Furthermore, higher education and basic education have coexisted with relatively little interaction. Despite the impact of the quality of university teaching and research on the state of the educational system of a country, there has been a tendency for universities to pay little attention to the primary and secondary levels of the school system. Even university departments of education have sometimes needed encouragement to develop partnerships for educational research and teacher placements with local schools.

Yet, it is increasingly recognized that all types and levels of education other than basic education, including higher education, must contribute significantly to the pursuit of Education For All (EFA) goals. Notably, the World Conference of Higher Education (1998) proclaimed that one of the missions of higher education is “to contribute to the development and improvement of education at all levels”. In the context of formulating lifelong learning policies, and crafting more coherent, seamless, and flexible education and training systems, universities are likely to have an important role to play in supporting teaching and learning at all levels. Yet, the extent to which universities already support basic education and the nature of this support are not well known. In some countries, universities play a much greater role in supporting basic education than in others.

While many universities are keen to demonstrate their contribution to territorial development, and most have some links with other educational

institutions in their locality, the exact roles and priorities of universities in relation to supporting basic education remains to be further specified.

Innovative universities conceive themselves to have three complementary missions, namely research, teaching, and service to the community. It is the “third mission” of service to the community – of which support to basic education is a part – that is the main focus here (Maguire 2002).

To perform an active and constructive role in rural development, agricultural universities need: to adjust their programs to accommodate new topics, as well as teaching and learning models; new partnerships with schools, academia and rural space stakeholders; expanded representation in governance; and continuous dialogue with policy-makers.

HAE can be a key source of knowledge for rural development. HAE institutions have the responsibility to provide teaching and learning opportunities for those who seek careers in the management of the rural development process or who will, at various levels, implement rural development activities and processes. This includes knowledge and skills for off-farm employment and

the provision of lifelong learning opportunities. As important is the emerging broader educational mandate of HAE institutions vis-à-vis rural people.

Ideally, all levels of education should be able to turn to universities for support. University faculty should feel concerned with learning achievement in schools since it influences their teaching and, ultimately, the quality of the university itself. To maximize their contribution to rural development, agricultural universities must first understand the scope of that process and analyze the educational needs of all the rural stakeholders. Too often, university managers and faculty still consider support to basic education as a departure or distraction from the core tasks of a university. However, it is asserted here that greater involvement in improving teaching and learning at all levels will ultimately help universities to become better, more relevant, and more responsive learning institutions.

Thus, HAE institutions’ extension services could include support to education for rural people that encompasses primary, secondary, vocational, and adult education (Table 2).

**Table 2. The expanded mandate of HAE institutions**

Type of support by HAE	Input	Output
Professional and technical education for rural development	HAE delivered programs. Joint programs with other parts of HE system. Contributions to other academic programs (social, health, education, economics, infrastructure, environment).	Human resources with knowledge and skills to manage and implement the processes of rural development.
Policy advice on education for rural development	Vision, strategy, analysis and data for policy-makers and leaders from other sectors and society concerned with rural development issues.	Rational and sustainable education policies for agriculture and the rural areas together with the resources needed to implement the policies.
Support to primary, secondary, vocational, and adult education for rural areas	Curriculum advice and input for each level. Materials preparation for each level. Teacher training related to Agriculture and NRM in curricula. In-service training for ERD practitioners.	Key knowledge and skills for agriculture, NRM and related agribusiness activities available to the rural population. Links between agriculture and NRM, and the environment, health, nutrition, and infrastructure clarified.



Table 2. (Continued)

Type of support by HAE	Input	Output
Lifelong education for rural space population and others	Structured learning activities and debate on agriculture and NRM issues and their importance to rural development. Short duration training for policymakers, politicians, and civil society leaders.	An informed public supportive of the process of rural development from a position of knowledge and factual information. Alert and aware policymakers and political leaders who provide sustainable support for rural development.

### *Meeting the Learning Needs of the Rural People*

In a number of countries, higher education institutions are already active in the field of basic education, beyond their established roles in teacher education and curriculum development. In view of rapid transformations in the education sector, a major issue of growing interest relates to the ways in which universities might best contribute to the development of basic education in the context of lifelong learning.

University-school-community collaboration can contribute to promoting education for active citizenship in a way consistent with universities' traditional mission of advancing and transmitting knowledge for democratic societies. Universities also have enormous resources – human, economic, and other kinds – which can potentially be used creatively in situations of economic and community disintegration.

Specifically, to help achieve Education For All, it has been suggested that universities could, for example:

- Initiate adult literacy classes on campus;
- Introduce a national service course requiring students to teach in basic education schools as a condition for graduation;
- Launch campaigns motivating and encouraging children of lower socioeconomic status and women to pursue basic education; this can be done through media and the extramural projects or activities of the university;
- Have the 'extramural studies department' organize community meetings wherein they can discuss the usefulness and the quality of

the basic education programs in so far as they concern the institution of higher education (e.g. adult literacy program of the department, the training of teachers, the content of the training materials prepared within the institution of higher education, etc);

- Work with media in preparing programs geared towards reinforcing and sustaining education for neo-literates;
- Organize evening meetings wherein the members of the community may identify any inefficiency perceived and experienced by them and discuss possible means of correcting them;
- Organize meetings with potential donors to finance programs to improve basic education;
- Organize evening in-service classes for school and program managers, featuring lectures on educational management (Sanyal 2001).

In addition to these education and training roles, agricultural universities may also be able to improve the quality of education and contribute to educational reforms in many ways. Working to solve the problems of their university's locality can provide students and faculty members with outstanding opportunities for effective learning, service, and the advancement of knowledge. Involving students and teachers in the development of readings and video production is an example of such linkages. The contribution of university students to the planning committees of local schools is another example. In addition, students and faculty members can be encouraged to get involved in other community service and educational programs, promoting for example, health and nutrition, or community arts.

In collaboration with schools and community organizations, innovative agricultural universities encourage participatory action research, focused on finding solutions to community problems. Hence, university-school linkages can be conceived as hubs around which networks and local partnerships are generated and formed, illustrating a decentralized, democratic, and community-based response to rural development problems.

Engagement in community outreach may have significant implications for the organization and nature of research (Andrews 2004). The established model of peer review, involving academic colleagues as the primary peers, often means that the researchers concentrate as much on the generation of knowledge acceptable within their discipline as on the solution of society's problems. Researchers often do not benefit from feedback from the stakeholders in relevant occupations who presumably are the ones who will have to apply the knowledge. Researcher-initiated studies, carried out in protected environments like experiment stations or on-campus laboratories, and subject only to academic peer review, may benefit little from the experience and feedback of such constituencies. Such work misses an opportunity to initiate the knowledge transfer process, and does not predispose the research institutions to respond to changes in the society. Developing a model of applied research that is more community-driven constitutes one direction by which agricultural universities can become more responsive to the rural environment. New avenues for outreach programs also concern local development and lifelong learning.

In the USA, the experience of the rural community colleges illustrate how tertiary institutions can work in conjunction with other critical organizations in the community, acting as a catalyst for rural community and economic development. The mandate of community colleges is not academic research, but teaching and learning. Their primary focus is the "community" they serve, meeting the educational needs that impact on the economic and social development of the community. Each community college can respond in different ways to the needs of its locality, with each technical and vocational program having an advisory committee made up of community representatives (Halder 2003).

The contributions of Japanese national universities to lifelong learning provide another example. The Niigata University Faculty of Agriculture offers a number of adult education programs to rice farmers in the surrounding region (Kato 2003). These include extension programs; practical programs in the Field Center for Sustainable Agriculture and Forestry; and educational programs in cooperation with the community. Distance education methodologies, including the internet, videoconferencing, and local TV broadcasts, are used in various activities. It is interesting to note that their involvement in such activities places new demands on the universities, including the need to focus on addressing local problems and supporting community identities, and planning collaboratively for future developments.

## UNESCO AND HAE

### *The EFA Flagship Initiative on Education for Rural People (ERP)*

Recognizing education as a prerequisite of sustainable rural development, the Food and Agriculture Organization (FAO) launched in 2002, in collaboration with UNESCO, the Education for Rural People (ERP) (<http://www.fao.org/sd/erp/>). This flagship program to promote basic education in rural areas involves:

1. Targeting multiple stakeholders, focusing on 'Education for All' in harmony with the renewed commitment made by the international community at the World Education Forum held in Dakar in 2000, and on 'Food for All' as stated at the World Food Summit in 2002;
2. Placing education at the core of global and national development and food security agendas, by focusing on the following priorities:
  - Expanding access to education and improving school attendance in rural areas;
  - Improving the quality of education; and
  - Finding appropriate ways to incorporate rural development and food security in the basic education curriculum.



3. Strengthening institutional capacity in planning and managing education for rural development and food security.

The ERP flagship initiative is a worldwide call to action focusing on education for rural children, youth, and adults through formal and non-formal education. ERP aims to improve rural people's access to quality education as a way of contributing to the fulfillment of their basic human rights, and to the promotion of rural development and the transformation of rural communities through capacity building of rural people.

The flagship's main activities include:

*At the national level:*

- Technical support to countries willing to address the basic educational needs of the rural people by formulating specific plans of action as part of the national plans on Education For All.

*At the international level:*

- Advocating and mobilizing partnerships for the education of rural people by concentrating on strategic global, regional, and international events, and encouraging the same within countries;
- Identifying the capacity for different substantive components on education for rural people within partner institutions; and
- Supporting the exchange of good practices and knowledge on education for rural people.

The ERP strategy, which focuses on basic education for rural people, goes far beyond agricultural education. It is based on the assumption that educational programs in rural areas need to expand to include a variety of skills appropriate for rural areas. For instance, in areas ravaged by HIV/AIDS, education about basic health, coupled with food production under conditions of labor scarcity, may have very high priority for rural people. Or, in cases where very high rates of urban migration have been observed, education on agro-based value-added processing and marketing may help to make living in rural areas an attractive and viable option. These are basic tools for improving rural people's lives and should be part of their basic education.

ERP is not conceived as a replacement for agricultural and extension education. Rather, it is a natural complement that expands the focus while building on the lessons learned by agricultural and extension educators. It also offers a rare window of opportunity in which there is heightened awareness of the importance of education in rural and agricultural development processes.

***The IIEP/FAO Research  
on HAE Institutions in Asia***

In relation to the flagship initiative, IIEP launched in 2004, in collaboration with FAO, is a program of research on the contribution of HAE institutions to learning and rural development in Asia. It involves selected universities in China (China Agricultural University), Japan (Universities of Nagoya, Obihiro, and Tsukuba), Malaysia (Universiti Putra Malaysia), Philippines (University of the Philippines Los Baños), and Thailand (Kasetsart University).

The case studies will document the repositioning of these institutions within their specific local environments. The focus is placed on the outreach and extension programs, with particular attention to innovative forms of collaboration with other stakeholders, including schools, and to strategies and instruments aimed at strengthening the role of HAE institutions as catalysts for local development and learning in rural areas.

## CONCLUSIONS

HAE institutions play many important roles in terms of their intellectual leadership for agriculture and their contribution to learning and knowledge generation. However, it is also clear that policymakers can look to HAE institutions to be more proactive in further developing their outreach and extension services for the benefit of the education of rural people.

A major challenge for higher education institutions serving rural areas is to be able to combine local relevance and international standards. Besides attending to problems of significance, universities can potentially become showcases of local traditions and knowledge, reflecting the regional, cultural, and ethical traditions of their society, as well as global movements and forces.

Although it is not easy for universities to think in terms of both their universal mission of knowledge production and their contribution to the development of local communities, the experiences described suggest some possibilities for the future. Increasingly, universities are developing strategies to intensify and widen their contribution to learning and development for rural people. In addition to their roles in curriculum development and training teachers and trainers, universities play an essential role in conceptualizing development problems and policies. They can contribute in a variety of ways to supporting education in local communities and regions as well as supporting rural development initiatives. Universities can potentially make a greater contribution to the prospects of depressed, relatively neglected rural communities. HAE institutions can also provide access to lifelong learning to rural people. However, to fulfill their roles as contributors to a culture of learning and rural development, HAE institutions need to engage more directly and more effectively in partnerships and dialogue with other local educational institutions and their surrounding communities.

The ongoing IIEP-UNESCO/FAO program of research on HAE institutions in Asia should provide information on how higher education institutions contribute to learning and rural development, and insights on how their strategic role in this field could be strengthened and further developed.

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