

OVERVIEW: VIETNAM

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This case study is about system-approach to upland agriculture curriculum development (UA-focused) in Vietnam. It describes the rationale for change, the strategy, the approach, the methodology and the process for curriculum development, with special emphasis on upland agriculture, at the university level in recent history.

Upland agriculture education and training is an important component of the education system in Vietnam. The institutions involved in UA-focused education and training include: five vocational schools, three technical schools, one agriculture and forestry college, one university and four faculties of forestry in agriculture and forestry universities. Since 1993, an agriculture and forestry extension system has been established throughout the country in order to improve informal training for farmers. With the support of the Social Forestry Support Program funded by the Swiss Government, a Social Forestry Training Network was established in 1996 and consists of five forestry education institutions at the university level, a research institute and an agriculture and forestry extension centre.

Since the implementation of the government's *doi moi* policies in 1986, the economic, political and social context of Vietnam has changed dramatically, with a trend towards decentralization, democracy and co-operation. Vietnam has thus shifted from a planned economy to a state-regulated market economy, applying multi-sectored economic development policies. There have been fundamental changes in agricultural and forestry land use rights, and a new land law has created a legal basis for offering long-term land use rights for individuals, social institutions and communities. There is a shift from forestry based on state management, towards forestry by the people and for the people. This shift is creating new employment possibilities in agriculture-related fields.

Previously, agriculture curricula at the university level were highly specialized and based mainly on crop and animal production techniques imported from European models. Additionally, separation of the functions of training, research and extension meant that many of these curricula were not closely linked with field practices and were often overly academic. The national training needs assessment (TNA) and workshop on social forestry training in 1996 indicated an urgent need for change in forestry curriculum to correspond with the new social, economic and political development of the country.

In 1998, the Ministry of Agriculture and Rural Development (MARD) and the Ministry of Education and Training (MET) approved the introduction of a major in social forestry at the Forestry University of Vietnam. Other universities are also revising forestry curricula. Many international rural development projects and programs in Vietnam have contributed to the curriculum development process. International training and research institutions, such as the Regional Community Forestry Training Centre (RECOFTC), the International Centre for Research in Agroforestry (ICRAF) and the International Institute for Rural Reconstruction (IIRR) have provided training or experts for the curriculum development process.

The curriculum development strategy of universities in Vietnam indicates an orientation to train new agriculturists for the future. Modern graduates should have capacity as technicians, managers, trainers as well as facilitators to work effectively with farmers and their communities in order to maintain and develop the natural resource. In previous years, training of graduates had focused mainly on crop and animal production techniques and on

management of state-owned enterprises. With the emergence of new capacities for graduates, the philosophies and principles for curriculum development need to be agreed upon by different stakeholders. Curricula should be cognitive, learner-centered and guided by research results which have been tested in the field.

Curriculum development in Vietnam throughout the 1990s can be divided into three main stages. The first stage is before 1993, where the main approach was expert-centered curriculum development. The second stage may be considered since the creation of a social forestry specialization and major, between 1994 and 1997, based on consultation with experts at the Xuan Mai Forestry University. The third stage, since 1998, includes four main subjects developed based on a PCD approach with all working partners of the training network, as well as, a range of other stakeholders.

Curriculum development should be based on certain foundations and some boundaries need to be defined in order to establish a manageable process. In Vietnam, curriculum development should be based on a legal system for education adopted by the Ministry of Education and Training, and based on regulations for natural resource management adopted by the Ministry of Agriculture and Rural Development. Other legal systems and policies should also be considered, such as, priorities for ethnic groups and remote areas, gender, national cultural identity and biodiversity conservation. All of these areas may influence which topics may be included in the new curriculum.

In general, curriculum development may require various resources for collecting, analysing and synthesizing information as well as the development of teaching and learning materials. In recent years, forestry curriculum development in Vietnam has shown the importance of the establishment of an information exchange system between domestic and foreign training institutions. Human resource development plays a key role in this process.

PCD is a dynamic and continuous process for long-term development. As such, it requires financial inputs over a long period of time. It begins with stakeholder analysis and includes the identification of key stakeholders participating in curriculum development, an assessment of their interests and the ways in which these interests affect curriculum development viability. Results of stakeholder analysis show the list of stakeholders, their functions and contributions and the types of participation in different stages of the training cycle, which includes situation analysis, TNA, setting aims, planning, implementation and evaluation. This methodology can be applied to curriculum development for any type of training course.

In order to encourage participation and to obtain feedback and inputs from stakeholders, some mechanisms and solutions should be developed. These may include involvement in TNAs, participation in workshops, establishment of a network on training, research and information exchange systems, joint research and training initiatives with other institutions, inviting visiting lecturers from other projects or programs and participatory monitoring and evaluation.

Participatory curriculum development in forestry education in Vietnam started in 1996 with two main processes: PCD for a social forestry specialization and the social forestry major at the Forestry University of Vietnam and; PCD for four common subjects for five agriculture and forestry universities.

From 1994 to 1997, all five agriculture and forestry universities participated in the TNA, a national workshop on social forestry training and the development of a framework for the social forestry specialization and major at the Forestry University of Vietnam in Xuan Mai.

Based on these foundations, the lecturers of the Forestry University developed detailed contents, teaching methods and teaching materials. Two social forestry specialization courses were organized in 1997 and 1998, with the creation of the social forestry major in 1998. For these, 14 new subjects were developed based on a participatory approach, including: introductory social forestry, land use management, social forestry project management, forestry extension, rural appraisal, communication, local organization, social analysis, non-wood product management, agriculture cultivation, animal husbandry, rural economics, household and farm economics and agroforestry.

Since 1998, seven working partners in the Social Forestry Training Network have developed four common subjects: introductory social forestry, forestry extension, social forestry project management and agroforestry. There has also been joint production of educational products such as curriculum frameworks, learning materials, detailed contents and methods for teaching and learning.

Forestry curriculum development and revision in Vietnam has taken some positive steps forward. A number of strengths, weaknesses, opportunities and threats can be identified based on this experience. The main strengths include: the capacity for co-ordination and co-operation between other training units; the ability to develop programs and; the potential to develop teaching staff and improve institutions and organizations.

The main weaknesses as identified in this study include: a lack of awareness about PCD, lack of knowledge, skills and experience about co-operation and collaboration; poor conditions for teaching and learning; inadequate time and financial resources, and; the lack of information and documentation. The main opportunities arise from the support of government and different international organizations. The main threats include the difficulties of making curricula development a sustainable process using the PCD approach and the lack of consistent government policies.

Curriculum development for forestry education should be based on the foundation of human resource development for training institutions. Curriculum needs to be closely linked with scientific research and extension activities. Special attention must also be given to integrating the development of curriculum content, teaching methods and learning materials. The establishment of a training network is an effective way to channel support and co-operation. A range of suitable mechanisms and incentives for stakeholders are needed, however, to establish a sustainable curriculum development process.

Based on the achievements and experiences over the past few years in Vietnam some recommendations are made. These include, the establishment of a training network and a human resource development strategy; address the development of content, methods and materials; design mechanisms for collaboration and information exchange systems; link training, research and extension and; development of a system for participatory monitoring and evaluation.

Introduction

This case study describes the university-level upland agriculture-focused curriculum (UA-focused) development activity conducted by a network of VUF (five agriculture and forestry education institutions in Vietnam). Special emphasis is given to the development of curricula for degree subjects and programs, as well as short training courses related to upland agriculture. The purpose of UA-focused curriculum development is to prepare the agriculture education system in Vietnam for the challenges of sustainable tropical agriculture-forest management in the 21st century. The challenges are clear: Vietnam has experienced a rapid

socio-economic transition after its *doi moi* policy was adopted in 1986, and; the private sector is increasingly becoming involved in forestry, and deforestation has reached alarming rates. New policies have been developed to enable forest-dweller communities to participate in the agriculture-forest management system and ambitious State programs have been implemented to rehabilitate national forest assets and to realize more sustainable agriculture-forest management practices. This has led to the creation of new types of jobs for graduates, especially in the area of upland agriculture extension. Some existing areas of employment are now in doubt, however, including the State Forest Enterprises, whose role is currently being reviewed. In response to these trends, needs for change in the national agriculture-forestry education system have been identified.

These challenges have been perceived in the context of an emerging paradigm in upland agriculture management. Future agriculturists need to acquire knowledge, skills and attitudes which will enable them to work with rural communities to develop appropriate technologies and to make them available for the end users. UA-focused education should be improved in this direction, both in content and in teaching methods. Curricula need to be shaped not only by the perceptions of teaching bodies, but with the participation of different stakeholders. This explains why a participatory approach was adopted in the development process.

This is the first time that a system approach has been used in Vietnam for UA-focused curriculum development. There was no "model" for the activity; instead, a process of "learning by doing" has been employed. Participating teaching staff involved in the process has been trained in different aspects of curriculum development cycle and workshops have been organized to enable information sharing. It is therefore hoped that the lessons drawn from the process within the rapidly evolving context of Vietnam will offer ideas which can be adapted to similar activities in the region and beyond.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Major changes in the socio-economic and political conditions in Vietnam over the last few years towards decentralization, democracy and harmonization have created the necessary conditions and motivation for the revision of forestry curriculum development.

Throughout the 1990s, forestry education at the university level in Vietnam has developed and changed towards an orientation of training social foresters. With support from the Social Forestry Support Program (SFSP) funded by the Swiss Government, changes have been taking place in the agriculture and forestry universities in Vietnam.

Based on the establishment of a national Social Forestry Training Network, new approaches to curriculum development have been applied. For the first time, a National Training Needs Assessment and Workshop were organized. Curricula for social forestry specializations, a social forestry major and other courses were developed using approaches with the participation of stakeholders, based on the training needs of Vietnamese society. Curriculum development has been seen to have close links with human resource development and the generation of knowledge through research activities and extension in the field. An information exchange system has been established to support and facilitate the curriculum development process.

It is important to acknowledge, however, that as well as providing opportunities, participatory curriculum development in a nation-wide network faces new obstacles and challenges.

Lessons learned from Vietnam suggest that in order to facilitate forestry curriculum development and to bring about real change, an intervention must work at institutional level as well as with individuals. Special attention must be paid to the creation of a system that locates the PCD process within an integrated approach to human resource development, generation of knowledge and the establishment of a wide information exchange network for collaboration and sharing among stakeholders.

Recommendations

In order to facilitate the forestry curriculum revision process and based on some achievements and experience over the past few years, some recommendations can be made:

1. It is extremely valuable to establish a forestry training network which creates opportunities for sharing and co-operation between training institutions. This training network can be expanded from universities to include colleges, vocational and technical schools, and even extension and field-based organizations.
2. PCD needs to be based on a "human resources development" program, including development and training of teachers. Curriculum revision must be founded upon the generation of knowledge from reality or based on sharing experience from other institutions. Curriculum development needs time to improve knowledge and to learn from experience. Developing resources for training is also essential to make the improvement of training institutions a sustainable process.
3. It is necessary to analyse and choose appropriate approaches to curriculum development for different majors and subjects. PCD has a lot of advantages, but it is time consuming and costly.
4. In curriculum development, it is necessary to focus on the development of training contents, methods and teaching materials. However, as experience has shown, the application of learner-centred teaching methods and the development of supporting teaching and learning materials require a certain level of capacity of the teachers and also a minimum requirement for physical conditions.
5. It is important to establish a mechanism for collaboration between the training, research and extension components. This collaboration can be created within a training institution or between training and extension institutions. The collaboration must begin with a willingness to co-operate, based on the recognition of a mutual benefit for both sides during the curriculum development process.
6. A system is needed for the exchange of information in order to promote the whole PCD process. This may include facilities such as e-mail, fax, collaboration in the development of a website or specialized publications. In order to ensure a continuous exchange between stakeholders however, it is necessary to establish a co-operative mechanism, which ensures benefits to all.
7. An important organizational strategy is to create a link between training and service activities. Most of the training institutions in Vietnam, and in many other countries, face severe financial constraints. Undertaking external assignments such as providing services to international programmes and organizations may generate resources for the universities. Such money may be used to promote research and other academic uses. However, taking on external activities requires time and energy. There is a danger that

more attractive or lucrative work offered by outside organizations may be taken up to the disadvantage of the "regular" training activities at the institution. Unless a conscious decision is made to change the overall training strategy, the core activities of teaching and learning should not be neglected by teachers or by the institution as a whole.

8. It is important to create a system for regular monitoring, evaluation and feedback. This system should exist within, as well as outside, the institution and should include all stakeholders. Experience shows that monitoring and evaluation are often difficult, so there must be a mechanism to ensure that it is undertaken. The CIPP model of evaluation is considered an appropriate one in PCD in the Vietnam context and it can be applied to different types and levels of training.