

Agriculture for Sustainable Livelihood through DE

Gamini Kulatunga, Agricultural Engineering OUSL

Abstract

The Open University with the assistance of Operation Days Work of Norway has launched in 2005, a certificate programme on Agriculture for Sustainable Livelihood. This is a follow up programme of the Rural Communication Project that was completed in 2004, undertaken by the Rural Research Unit (RRU) of OUSL and COL, which identified technologies that are of immediate relevance to the rural poor. The ability of the rural people to adapt technologies to suit their needs was demonstrated.

RRU decided to embark on a programme for the rural youth using a combination of distance learning methods and learning by doing. Norwegian Operation Day's Work approved the concept of taking technology to underserved distant regions to empower youth to seek livelihoods in their own situation instead of migrating to the urban areas .

The Open University began the programme, operating five rural study centres in remote locations catering to 90 students, supported by five animators. The programme is conducted in Sinhala and Tamil using printed material supported by work done using local resources. The main activities chosen by the students address rural food needs and value addition to agricultural produce. On completion of the students' projects , in March 2006, the students will be awarded a certificate in Agriculture for Sustainable Livelihood.

Plans are afoot to expand the programme to two more centres from this year. In the coming years emphasis will be paid to meeting energy needs, as it has been identified as a crucial constraint that hampers rural development.

Background

The Open University of Sri Lanka (OUSL) with the assistance of Operation Days Work of Norway has launched in 2005, a certificate programme on Sustainable Livelihood for Agriculture. This is a follow up programme culminating from the Rural Communication Project undertaken by the Rural Research Unit of OUSL with COL assistance. This programme was completed in 2004 and enabled it identification of technologies that are of immediate relevance to the rural poor.

The ability of the rural people to adapt technologies to suit their needs was amply demonstrated in the pilot phase and we decided to embark on a project to foster this ability among the rural youth using a combination of learning methods mainly based on doing. Norwegian funding agency approved the concept of taking the technology to three distant regions to empower the youth to seek livelihoods in their own situation instead of migrating to the urban areas in search of jobs.

Preliminary work

We set up five learning centres in the districts of Ampara, Vavuniya and Badulla. Around 90 students are following the one-year certificate programme in Agriculture for Sustainable Livelihood. The programme is based on developing core competencies but the learning

contracts we enter into will specify the preferred learning method and evaluation in individual cases. The students were selected on their commitment to carry out field work in the areas of selection and the evaluation will be done mainly on the work performed .

Four project officers/animators were recruited to be in charge of student groups. They were given training on basic workshop practice, handling and use of workshop and farm tools. They also had a hands-on experience in growing mushrooms, making yoghurt etc. so that they are well prepared to face the challenges and deal properly with problems that they could face with once the programme is commenced.

Two more persons were appointed to be in charge of the project and they are stationed at the Central Campus, Nawala. One of them, appointed as project coordinator is responsible for overall implementation of the project and the other, appointed as a Research Assistant is entrusted with farm work, purchasing and in assisting the Project Coordinator in the day-to-day operations.

Policy decisions related to the implementation of project and academic matters are taken at the steering Committee meetings held monthly. The Steering Committee consists of academic staff of the department of agricultural and plantation engineering, selected academics of the RRU and the project staff and chaired by the project coordinator.

For fulfilling the above objectives, 8 courses were prepared under supervision of the senior staff. These lessons were translated to Tamil medium by the animator from Vavuniya. In the next phase, students were selected and recruited to the programme and locations were selected where programme would be conducted. In Ampara district, most of the students, selected for the programme are Tamil-speaking. Therefore, a new Tamil-speaking animator was recruited to the Kalmunai center. Kalmunai was added as a new center for the programme.

Achievements

The programme is directed at students from deprived areas with little access to technology related to agriculture. The selection was based on their needs and our ability to teach.

Most of the technologies introduced are related to livelihoods connected with agricultural activities involving fruits, vegetables, animal husbandry, rural energy, water management etc.

Texts in the vernacular i.e. Sinhala and Tamil have been prepared on the following subject areas: Environment; Food, Nutrition and Health; Soil Plant Growth and Development; Commerce and Management; Organic Farming; Rice Processing; Conservation of Soil and Water; Law and Human Rights; The following are under preparation: Rural Construction; Communication Skills; Food Processing and Preservation; Pest Control on Crop Production; Post Harvest Methods; Irrigation and Rainwater Harvesting; Occupational Health in Rural Agriculture; Rural Community Development; Alternate energy Sources for Rural Development; Agricultural Equipment; Milk Production.

The students' activities are based on project work supported by written material and day-classes. The assessment will be based on the success of projects to meet sustainable livelihoods.

At present student groups have been formed into carrying out joint activities such as mushroom production, curd production and livestock management. These groups would be formed into worker cooperatives in the long-term to make these initiatives sustainable.

Some of the technologies needed by the rural people such as power and electricity are being studied at the moment and several installations are planned. For immediate study RRU has installed a Home Solar System (photovoltaic) and a wind mill for electric power generation in the Colombo campus premises. Next year, a biomass gasifier will be installed in the campus for comparison study with the wind mill and the solar system.

In order to gain hands on experience under real life situations of the technologies we introduce, the RRU has come to an agreement with a farm at Bandaragama, run by group of factory workers trained by the RRU, to carry out trials in their farm. This farm is run as a cooperative organic farm producing indigenous varieties of rice and vegetables.

Critical learning and community work

The emphasis is on the ability to adapt, critically evaluate and work with others in performing their work. Delors four pillars of learning viz. learning to know; learning to do; learning to live together; and learning to be will form the main thrust of the learning outcomes. As Ikuo Arai says, the second and third pillars of Delors will be combined to form “learning to do for others” as critical thinking would imply doing things that benefit others and not individuals.

The subject matter selected is guided by the philosophy adopted by the Commonwealth Diploma in Youth in Development. “This is a period in history when, while epistemology and individual wants and needs are always sharp, they have to be subservient to social and community needs. So, the subject matter has only been privileged to the extent that mastering it is a necessary dimension of community action, and it is intended that individual needs are addressed only in so far as they are essential to motivation, though they will often be co-extensive with community needs”.

Independent and personal initiative or even a task of upsetting the established order are the best guarantee of creativity and innovation (Delors, 1996). The rejection of imported inappropriate models, the harnessing of traditional implied forms of knowledge and empowerment are effective factors in endogenous development, aimed at in the programme.

We will try to foster creativity and innovation through reflection and relaxation and also being open and focused at the same time (Mihaly Csikszentmihaly). We will try to teach less but allow more thinking (slowly), and make room for incubation and dreaming (Gerd Binnig).

Method of imparting knowledge

The animators appointed at each centre do conduct limited day classes, but the main method adopted is visits to the homes of the students, where the assigned activities are performed with community participation. The parents and neighbours of the students are closely associated with the work undertaken.

The students' activities are based on project work done supported by written material and day-classes. The student would be evaluated mainly on the successful completion of projects undertaken by them to meet sustainable livelihoods in the areas they live.

Work will be offered informally within the social institutions of the family, on the family farm or the family shop or foundry. There will be family-like settings and there will be mentoring relationship between people learning from each other. This we hope will minimise the institutionalization of education resulting in the negation of the right of individuals to self-education (Bhola, 1995).

The animators are equipped with computers and cellular phones that enable them to communicate with the centre in Colombo for sharing information and reporting progress. The progress reports are supplemented with digital photographs.

Evaluation of students and the project

The students will be assessed using both continuous assessment and end-of-session examination as follows:

Continuous assessment (Weightage 75%)

1. Participation in joint learning activities (assessment by animator) 20%
2. Spot tests (spontaneous responses to practical problems posed) 20%
3. Success of project (assessed by interview at site, by a panel) 60%

End-of-session written examination (Weightage 25%)

Test of comprehension and critical analysis, on each of the subject areas.

a) Project evaluation by the staff

To assess whether the students have applied the knowledge gained by following the programme to implement a sustainable livelihood.

Is the student in a position to apply the training to another set of conditions?

Is the student confident of obtaining information required for a new venture?

Has the student obtained the cooperation of fellow students and community at large?

Does the student now appreciate other conditions that play a role in success of any technology such as market, finance, access to technology changes etc?

Is the student made confident that local resources and local opportunities are attractive for further involvement?

Does the student feel that further studies will improve his condition?

Does the student feel confident to talk about his experience?

Has the student's ability to plan improved?

Has the student learnt to do a self assessment of what he is doing and has done?

b) Project evaluation by the students

(1-5 varying from very good to very bad) 1 2 3 4 5

1. My livelihood has improved and now I am more independent
2. I can handle problems of similar nature on my own
3. Now I know where to get relevant information
4. My parents, relatives and friends helped me and work with me

5. I see how market and finance affect my efforts
6. Now I see a large opportunity in the locality
7. I would like to learn more about the subject
8. I would like to share my knowledge with others
9. I could now plan what I want to do
10. I would like to rethink on what I have done to improve it

The future

In 2006 the number of centres will be increased to eight by extending the programme to two areas where poverty and water are the two main problems faced by the communities i.e. Monaragala and Bibile.

The programme will continue for four years and will be reviewed for further funding. We are planning to set up worker cooperatives with the assistance of the student who will be completing the programme. This would be a method of self-sustaining the programme in the future.

COL is assisting OUSL to set up L3 programme for agricultural entrepreneurship and rural prosperity through distance education (Balasubramaniam, 2006). This programme mainly addresses issues of technology related to women. Though we have not placed special emphasis on the gender issue, more than 60 per cent of the enrolment are women.

The OUSL will be working in collaboration with the Ministry of Science and Technology that has launched a programme to take technology to the village (*Gamata Thankshanya*).

Already, 13 “*Vidatha*” centers have been set up to transfer income generating technology to the villages. Two of the centres are in Monaragala and Bibile where the Agriculture for Sustainable Livelihood Programme of the Rural Research Unit will be commencing new centres this year. We hope to collaborate with the Vidatha centres to sustain the programme launched by us and to ensure continuous support for the students who follow the programme initiated by us.

Reflection

Objectives and strategy

The project's main objective is to train a set of students to develop their livelihoods based on their capabilities and resources available within their reach. The technology was oriented towards agriculture as most of the students come from a rural agricultural background. But, it is our intention to use the technology as a tool to impart the skill required by the students to look for solutions and implement these on their own.

The animators selected are from an agricultural background and they were given an exposure to technology during the initial training of three months in Colombo. They were also involved in collating the teaching material to suit the objectives.

Learning emphasis is placed on hands-on experience which would be imparted at a series of workshops and by getting the students to undertake projects on their own. To facilitate this,

the students were asked to form into groups and get assistance from their parents and well-wishers in undertaking project that would be of use to the community.

Observations

The training of the animators has not been very successful as they continue to place emphasis on agriculture at the expense of technology. Their grasp of basic technology needs and application has not shown any ability to critically evaluate a situation. This was repeatedly seen in organizing the workshops where mere carrying out some work was the main aim. Even the consultant, who helped them to draw up some of the programmes, has not been able to impart this message.

The programme coordinator, too, lacks the ability to plan and execute simple activities. The facilities provided to effect good communication among the facilitators and the centre have also not been put into proper use. This is a failure on our part, and it raises serious doubts about realizing the objectives of the entire programme.

The monthly meetings have become routine explanation of work carried out by the animators in the field, without any critical issues raised and problems discussed. The entire proceeding looks like a project reporting exercise undertaken by any NGO. Though some students have started activities it is not clear what our contribution is and what the students' initiatives are.

Solution

A two-month intensive workshop is being conducted in Colombo to train the facilitators on project planning and execution within given constraints. The animators will be requested to select a project of their choice based on the experience gained. It has to be completed within the time frame and an evaluation be done by them whether it has met the objectives and limits set out at the beginning. A critical evaluation of the project will be presented to a team of observers from the Open University.

Students need to come to understand that the reason for learning is to nurture their intellectual talents for the construction of our society into amore democratic just and caring place to live. Citizens must be well informed and have the educational ability and sensitivities needed to critically examine the world in which we live (Maxine, Greene).

References

Balasubramanian. K. 2006. L3 Agricultural Entrepreneurship and Rural Prosperity through Distance Learning, COL

Bhola H.S. 1995. Functional Literacy, Workplace Literacy and Technical and Vocational Education: Interfaces and Policy Perspectives. UNESCO

Delors Jacques 1996. Education for the 21st Century UNESCO report

Gerd Binnig www.magazine-deutschland.de/issue/Binnig_5-05_ENG_E1.php

Ikuo Arai www.ldebate.org/magazine/files/magazine423b38606637b.pdf

Maxine Greene www.newfoundations.com/GALLERY/Greene.html

Michaly Csikzentmihaly www.lri.fr/~mackay/pdfiles/Interconnections2001.pdf

Annex 1 Map of Sri Lanka