Education for Sustainable Development: Reaching the Masses

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Education for Sustainable Development: Reaching the Masses

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Abstract

In order to succeed education for sustainable development must reach the masses. This means three things. First, we must focus on those who can multiply the message, especially teachers, working not just in the classroom but through open schooling systems. Second, we must cultivate lifelong environmental learning, including that related to climate change and water resources management. Third, it follows from these two imperatives that we must use learning technologies and teaching media at scale. We describe the work of the Commonwealth of Learning in these three areas. Technology-mediated open and distance education makes it possible for the Centre for Environmental Education to teach its Green Teacher Diploma to thousands of teachers. Information technology kiosks in villages allow farmers to become lifelong learners, increasing their prosperity and lessening their environmental impact.

Introduction

Ladies and Gentlemen it is special pleasure to speak to you for four reasons.

First, this session has become a nice metaphor for competition for resources due to overpopulation - competition for time, working microphones and the right computer as more and more speakers have been added to the list.

Second, and more seriously, the Decade for Education for Sustainable Development was launched when I was Assistant Director-General for Education at UNESCO and it is wonderful to see the progress being made.

Third, the Commonwealth of Learning has been a partner of our great host institution, the Centre for Environmental Education, for a number of years and it is a privilege to present some to the work we have done together.

Finally, the previous session, and particularly the speech by Shri R.P. Agrawal, has set the stage perfectly for what I have to say.

It is a pleasure to join with my COL colleagues, Professor Mohan Menon and Dr Krishna Alluri, in addressing this important conference. Our title is*Education for Sustainable Development: Reaching the Masses*. We start with an obvious statement. If education for sustainable development is to succeed it must reach the masses. That means two things.

First, we must either take the message to the masses directly or work with those who can multiply the message, particularly teachers. Second, to reach the masses we need to use the mass media and other technologies, because face-to-face communication cannot be scaled up to meet the challenge. Indeed, the same principle applies to teachers. There are millions of them and the conventional methods used for their professional development can't cope with the numbers wanting it.

We add a third condition. Education for sustainable development is not a one-shot event. It is an ongoing process; not a vaccination that lasts for life. This adds even greater numbers to the challenge of educating at scale.

We shall describe two initiatives of the Commonwealth of Learning that address these requirements squarely. First I shall talk about the Green Teacher Diploma which the Centre for Environmental Education, which will teach to thousands of teachers using technology-mediated open and distance learning. Second, we shall describe how we are using technology to enable farmers to become lifelong learners in their villages with the aim of improving their livelihoods and lessening the environmental impact of their agricultural methods. I start with Green Teacher.

The Green Teacher Diploma

Background

Green Teacher is a one-year Diploma in Environmental Education for teachers and educators. India's Centre for Environmental Education designed and developed it in partnership with the Commonwealth of Learning and it is the first programme of its kind in the Commonwealth. It was offered initially as a distance education programme with four modules in print form supported by field assignments and contact classes.

Now the programme is going digital with an instructional design that allows both online and blended learning. The aim of the course is to enable teachers to engage with environmental concerns and issues in

the classroom, and involve their students in practical, action-oriented Environmental Education (EE) projects.

So *Green Teacher* gives practicing teachers the opportunity become environmental educators who can influence the school curriculum and the way that it is taught. Teachers are multipliers of impact, so the long-term aim is to change how their fellow teachers, their pupils and the wider community think about the environment and sustainable development.

The development of the *Green Teacher* programme matched the expectations of India's National Policy of Education (1986) and its launch coincided nicely with the ruling of Supreme Court of India that environment should be a compulsory subject at all levels of education starting in 2004-2005.

Objectives and expected outcomes

The curriculum of the *Green Teacher* programme empowers practicing teachers with the knowledge, ideas and skills that can help them green their teaching. Its novel feature is that it has been designed to match the realities of education systems developing countries and in full appreciation of the roles and responsibilities of teachers in those systems and the dilemmas they face - one of which is little time for professional development. It recognises the diversity of contexts in which teaching takes place, the heterogeneity of the pupils and the limited resources available.

It also tries to convey the all-embracing, multidisciplinary and dynamic nature of environmental issues by being geared towards understanding and solving real-world problems. A teacher already trained in teaching Arts and Science subjects is given the extra set of skills required for imparting environmental education.

This is done through four course modules:

- The first deepens their understanding of Ecology and gives them ideas for communicating ecological concepts in an interactive manner.
- The second helps them appreciate the complexities of environmental issues in development by showing them how to view a problem from various perspectives and to select a plausible solution for a particular context.
- In the third module they practice communicating material so as to enrich and enhance the tried and tested textbook, chalk and talk methods in a variety of ways.
- The fourth module examines the range of resources that can contribute to environmental education in schools so that teachers can appreciate and use the opportunities that are available within the school system: text books, local visits, nature camps, media resources, and so on.

Course Implementation:

The English medium *Green Teacher* programme in print based was launched in 2005. 40 of the 53 students enrolled in the first batch graduated, including 31 women, and over 100 students are enrolled in

the second batch. The Centre for Environmental Education plans to enroll up to 200 students in the English medium course annually.

The course is being translated into three Indian languages through partnership with Navodaya Vidyalaya Samiti, the Maharashtra Knowledge Corporation Limited, the Yashwantrao Chavan Open University and the GEER Foundation. It hopes to offer the course in other countries in South Asia through a link with UNESCO and the course is also is being adapted for offering in Nigeria through the National Teachers' Institute.

GT-Online:

Finally, COL and the CEE are now digitizing the *Green Teacher* curriculum with a novel learning design so that with a suitable Learning Management System it can be offered both and off-line.

Lifelong Learning for Farmers

I turn now to our work with farmers in the developing world and the Commonwealth of Learning's programme *Lifelong Learning for Farmers.*

Two major factors affecting food security in developing countries are globalisation and declining agricultural productivity. Globalisation and the work of the World Trade Organization (WTO) have transformed markets for agricultural produce without farmers in developing countries being aware of the changes. To help them adapt to the challenges, the role of agricultural extension needs to be completely revamped.

Using the ICT-based Knowledge Revolution

For some years the Government of India (GOI) through the Indian Council of Agricultural Research (ICAR) has been promoting the idea of strengthening the agricultural sector by taking advantage of the ICT-based knowledge revolution. Government programmes such as the Department of Information Technology's *Mission 2007- Every Village a Knowledge Centre and Community Service Centre*, as well as private and NGO initiatives are increasingly bringing ICT to the doorstep of small and marginal farmers, agricultural labourers, fisher folk and forest-based communities to connect them to the knowledge revolution and strengthen the extension system.

Lifelong Learning for Farmers (L3 Farmers)

The Commonwealth of Learning conceived the Lifelong Learning for Farmers (L3 Farmers) project as a way of creating a paradigm shift in the concept and practice of extension. L3 for farmers, where 'farmers' include agricultural labourers and communities involved in various aspects of the primary sector) is based on the following premises:

- First, facilitating self-directed personal strategic learning can enhance the quality of extension and create a demand-based development process

- Second, Technology-Mediated Open and Distance Education and Learning, which my Indian colleagues abbreviate as 'Tech MODE' can play a major role in self-directed learning;
- Third, L3 Farmers assumes that mobilising the farmers and building cognitive social capital are essential preconditions for promoting self-directed learning;
- Fourth, combining modern ICT and local mobilisation can integrate the vertical and horizontal transfers of knowledge;
- Fifth, this new approach to extension must be placed firmly in the context of the entire social and economic value chain. The various stakeholders in that value chain such as financial institutions, marketing agencies, industries and research institutions need to come together to create a win-win-win framework. This helps communities to move away from perpetual dependence on donor-supported programmes and to adopt instead a self-sustainable, self-replicating, and self-generative extension process;
- Sixth and finally, the demand from rural communities for an integrated package of information to facilitate local knowledge management requires the knowledge creating institutions to work as a consortium to provide holistic locale-specific information.

As a key example of stakeholder engagement, the banking sector is responding positively to the L3 Farmers concept. The participating banks see L3 Farmers as a business strategy for themselves and a development strategy for the rural communities. COL has been launching pilot projects of the model in India, Sri Lanka, Mauritius, Kenya, Jamaica and Papua New Guinea.

Real examples

As a human example, Ms. S. Vallikannu, an illiterate 60-year old landless woman is involved in the L3 for Farmers Project in Uppukottai village, in the Theni District of Tamil Nadu, India. She has been able to access bank loans at an interest rate of 9% for setting up backyard dairy. In the past her family borrowed loans from money lenders at an exorbitant interest rate of 60%. She is the first person in her family ever to own a cow.

Finding that L3 Farmers is stimulating prompt repayment of their loans from the poor communities, the banking sector is realising that investing in capacity building with the help of ICT and mobilization can create new banking business.

Mr Kulaindaiswamy, a farmer in Kannivadi in the nearby district, learned through ICT- based learning materials about the System of Rice Intensification (SRI), a low-input, high-volume method of paddy cultivation. The average yield of paddy in this region is less than 5 tonnes per hectare. Mr. Kulaindaiswamy has harvested 8.5 tonnes of rice per hectare at lower cost and with less water. The farmers attribute this jump in efficiency and productivity to the learning and networking environment created by COL's L3 Farmers project with the help of NGOs such as the M. S. Swaminathan Research Foundation.

The L3 Farmers project uses ICT to encourage dialogue and discourse among the participating rural communities. This is a complete change from the style of the conventional extension system, which sees

the farmers as vessels to be filled with the extension agents' knowledge. Having all stakeholders participate in a win-win-win framework has the potential to create a self-sustaining development process.

Conclusion

These two examples are just two ways in which we can use media and ICTs to expand lifelong learning about sustainable development and stimulate positive and self-sustaining action at the grassroots. My COL colleagues Mohan Menon and Krishna Alluri will be pleased to tell you more.