



COMMONWEALTH *of* LEARNING

Quality Assurance Toolkit for Open and Distance Non-formal Education



**Quality Assurance
Toolkit
for
Open and Distance
Non-formal Education**

Colin Latchem



COMMONWEALTH *of* LEARNING

The Commonwealth of Learning (COL) is an intergovernmental organisation created by Commonwealth Heads of Government to encourage the development and sharing of open learning and distance education knowledge, resources and technologies.

Commonwealth of Learning, 2012



© 2012 by the Commonwealth of Learning. Quality Assurance Toolkit for Open and Distance Non-formal Education is made available under a Creative Commons Attribution-ShareAlike 3.0 Licence (international): <http://creativecommons.org/licenses/by-sa/3.0>

For the avoidance of doubt, by applying this licence the Commonwealth of Learning does not waive any privileges or immunities from claims that it may be entitled to assert, nor does the Commonwealth of Learning submit itself to the jurisdiction, courts, legal processes or laws of any jurisdiction.

With the exception of some photos not credited to the Commonwealth of Learning, all of this document may be reproduced without permission but with attribution to the Commonwealth of Learning and the author.

Quality Assurance Toolkit for Open and Distance Non-formal Education
ISBN: 978-1-894975-50-6

Colin Latchem

Commissioning Editor: Professor Asha Kanwar, Vice President, Commonwealth of Learning

The author and publisher wish to thank the following institutions, organisations and photographers by whose kind permission the photographs are reproduced: Africa Educational Trust; Alan A. Reiter, Wireless Internet & Mobile Computing; Alison Mead Richardson, Commonwealth of Learning; David Leeming, The Isabel Learning Network; eTUKTUK (Flickr); Food and Agriculture Organization of the United Nations Corporate Document Repository; Ian Pringle, Commonwealth of Learning; IICD (Flickr); Inkyhack (Flickr); Intersat Africa, Ltd. and Voices of Africa; Izzy Pitman; Mark Knobil, InformAfrica; The Citizens Foundation; Jenny C. Aker, Tufts University; Oliver Zielke, www.yodigo.tv; Rural Women Development and Environmental Organization (RUWDEO); Tostan; UNESCO; UNICEF; USAID/Philippines; Voices of Africa for Sustainable Development; and Women and Development Unit of the University of the West Indies School of Continuing Studies.

Published by:

Commonwealth of Learning
1055 West Hastings, Suite 1200
Vancouver, British Columbia
Canada V6E 2E9

Telephone: +1 604 775 8200

Fax: +1 604 775 8210

Web: www.col.org

E-mail: info@col.org

Contents

Foreword	vii
Acknowledgements	ix
Introduction	1
Part One	2
The importance of non-formal education	2
Defining terms	3
Informal learning	5
Self-directed learning	5
Non-formal education	5
Formal education	7
Adult education	9
Basic education	9
Highly contextualised and less highly contextualised NFE programmes.....	9
Community learning, community development and social capital development	10
Distance education	12
eLearning	12
mLearning.....	12
Blended learning.....	13
Flexible learning.....	13
Learner-centredness	13
Open educational resources.....	14
Monitoring.....	14
Evaluation	14
Quality assurance.....	15
Outcomes- or results-based quality assurance	15
Part Two	16
Non-formal education — opportunities and challenges	16
Part Three	20
Case studies of distance education-based NFE	20
Basic education and literacy programmes.....	20
Post-literacy programmes	22
English language programmes	25
Gender-responsive and transformative programmes.....	27

Vocational education, skills development and unemployed youth programmes	33
Programmes for the disabled	35
Agricultural development programmes	38
Healthcare, childcare and welfare programmes.....	43
Civic education, human rights, citizens’ rights and responsibilities, and democracy activism programmes.....	49
Emergency, conflict zone and displacement education programmes	52
Peace education programmes.....	55
Micro and small-to-medium enterprise development.....	58
Information kiosks and community-based telecentres.....	61
Part Four	66
Quality assurance in open and distance education-based non-formal education	66
Implementing a QA system in open and distance education-based NFE.....	69
Needs analysis.....	70
Vision and/or mission statement	71
Goals/objectives.....	72
Values, philosophy or premises	72
Strategies	72
Stakeholders and partners.....	73
Outcomes	74
Inputs	76
Gathering the data	77
Analysing and reporting on the data	79
Part Five	81
A QA framework for assessing and assuring outputs, outcomes and impacts	81
Assessing inputs.....	84
Part Six	87
Conclusions	87
References	89
About the author	99

Figures and Tables

Figure 1: The learning continuum 3
Figure 2: The quality cycle 77

Table 1: An analytic rubric for judging the achievement of key performance indicators or critical success factors..... 75
Table 2: An analytic rubric for judging the quality of a QA system 76
Table 3: Planning for gathering data for QA audits and self-reviews 77
Table 4: Means of gathering data for QA audits and self-reviews..... 78
Table 5: A QA framework for assessing outputs..... 82
Table 6: A QA framework for assessing outcomes 83
Table 7: A QA framework for assessing impacts..... 83
Table 8: QA framework for assessing inputs 84

Foreword

Some months ago, I had the honour of addressing a conference in Malaysia at which the government launched its *Blueprint on Enculturation of Lifelong Learning for Malaysia 2011–2020*. In his speech the Minister explained that henceforth, lifelong learning would be the country's third pillar of human resource development, alongside schooling and tertiary education.

Many governments are, like Malaysia, giving increasing prominence to lifelong learning. The Commonwealth of Learning's programme, which evolves to reflect the changing priorities of Commonwealth countries, is following this trend. Adopting the motto *Learning for Development* for COL's mission was a symbol of this evolution, because much of the learning needed to underpin development goals in poverty reduction and health occurs in non-formal settings.

COL makes quality a theme of all its work. Whenever we give special priority to any area of education, we try to provide its practitioners with the tools to create learning opportunities of quality. This is particularly important in open, distance and technology-mediated learning, for two contrasting reasons. First, many people are still sceptical about the quality of open and distance learning (ODL). Sometimes there are good reasons for this, although usually not. Second, because ODL requires a systematic approach, it is easier to produce high and consistent quality with ODL than with traditional classroom methods. For these two reasons, toolkits for quality assurance in ODL have a very strong multiplier impact.

Over the last decade, COL has worked with partners to create QA toolkits in three key areas: teacher education, higher education and open schooling. All these were extremely well received and have had a worldwide impact. As non-formal ODL became a more and more important part of COL's work, we became sensitive to the need for a similar toolkit in this area. None was available, so we decided to create one. The present toolkit aims to enhance the quality of learning through ODL in health, agriculture and skills development for the non-formal sector.

COL was extremely fortunate to obtain the services of Professor Colin Latchem to put the toolkit together. He has a global reputation as an ODL practitioner and scholar — and is also a longstanding friend of COL.

One of the great strengths of this toolkit, since non-formal ODL is such a diverse reality, is that it is also a rich source of examples of effective non-formal education in different parts of the world, not just the Commonwealth. These examples can trigger

ideas on how non-formal education can be provided using ODL and technology. It is also a practical guide on how to measure outputs, outcomes and impact in the non-formal sector, by giving the concrete case of the COL's flagship initiative, Lifelong Learning for Farmers. Finally, it provides a theoretical perspective on how QA can be integrated into non-formal education, and can initiate further discussion and debate on how this integration can be done.

I offer my warm thanks to Professor Colin Latchem and all those who have been involved in the preparation of this QA toolkit, both indirectly through the projects reported in the following pages and directly by contributing to the physical production of this document.

I commend it to all those who work in the burgeoning area of lifelong learning through ODL.

Sir John Daniel
President & CEO
Commonwealth of Learning

Acknowledgements

The author wishes to acknowledge the assistance received from the Commonwealth of Learning in developing this QA toolkit. In particular, he is grateful to Professor Asha S. Kanwar (Vice President) for her insights, experience and editorial guidance, Mrs. Frances J. Ferreira (Education Specialist, Open Schooling), Ms. Alison Mead Richardson (Education Specialist, Skills Development), Dr. K. Balasubramanian (Education Specialist, Agriculture and Livelihoods), and Mr. Ian Pringle (Education Specialist, Media) for their advice on the content, and to Mr. Dave Wilson (Communications Manager), Ms. Denise Tremblay (Designer and Production Coordinator) and Dr. Dania Sheldon (text editor) for their help in the book production. He is also indebted to the agencies who kindly agreed to the reproduction of their photographs in this book. Any errors or oversights in this work are entirely those of the author.

QA Introduction

In this toolkit, we take non-formal education (NFE) to be:

Any organized and sustained educational activities that do not correspond exactly to the definition of formal education. Non-formal education may therefore take place both within and outside educational institutions, and cater to persons of all ages. Depending on country contexts, it may cover educational programmes to impart adult literacy, basic education for out-of-school children, life-skills, work-skills, and general culture. Non-formal education programmes do not necessarily follow the 'ladder' system, and may have different duration, and may or may not confer certification of the learning achieved. (UNESCO, 2006, p. 1)

Despite the enormous and ever-increasing need for such education and training, NFE can be poorly and sporadically funded. This is partly because international, government, non-government and private sector organisations and other donors are not always convinced of its value. So it is essential to evidence that NFE programmes can bring tangible benefits to individuals, communities and economies, be multi-year programmes with specific achievable, measurable outcomes, build long-term partnerships between credible in-country partners and represent value for money.

Quality assurance (QA) systems applied in educational contexts are generally concerned with inputs — how much money is spent, what staffing, resources and support are provided, what kinds of teaching and learning are involved and so on. There is an assumption — not always fulfilled — that the higher the standards of the inputs, the higher the quality of the outputs. In this toolkit, we propose a different approach: the evaluation of the programmes' outcomes, outputs and impacts. We also:

- Examine the differences between informal and self-directed learning, NFE and formal education.
- Provide examples of NFE programmes using a variety of face-to-face, distance education and technology-based teaching and learning methods.
- Consider the outputs, outcomes and impacts required in NFE programmes.
- Examine the approaches to QA that are needed in NFE.
- Propose the adoption of a rigorous but simple-to-use QA framework which is based on outputs, outcomes and impacts.

QA

Part One

The importance of non-formal education

There is a massive need for non-formal education (NFE) in the developing world. It is required for a wide range of age groups, target populations, and geographic regions. It is needed to offer basic education, literacy and numeracy for those unable to gain entry to formal schooling, and to provide post-literacy programmes for youths and adults. It is needed to educate individuals, groups and entire communities in health, nutrition, family planning, child care and HIV/AIDS management. It is needed to empower communities and encourage and support development, to develop new knowledge and skills in such areas as agriculture, fishing, forestry management, construction, local handicrafts and computing, to provide para-professional training, and to help initiate and support local enterprises. It is also sometimes needed to help promote peace and reconciliation and to facilitate post-conflict reconstruction programmes.

By improving access to education and information throughout life, outside the recognised educational institutions, and by developing the capacity for self-realisation and community-based action, these NFE programmes can be of enormous benefit to vast numbers of people who are currently disadvantaged, marginalised or discriminated against in achieving a higher quality of life and standard of living.

Low-income and middle-income countries fully recognise the need to develop their human capital in order to develop sound market-based economies. NFE is a key feature in pursuing this goal. However, so great is the task that it cannot be achieved by conventional means alone. This is why applications of open and distance education and of information and communications technology (ICT) can play such a vital role. As Siaciwena (2000) observes, distance education requires fewer teachers to reach a larger number of learners, can utilise school buildings, community centres and other accommodation when these are not needed for other purposes, allows learners to continue earning while learning, and becomes economical once the startup costs have been met because of the low marginal cost of enrolling additional students. And, as Dhanarajan (2000, p. 6) observes:

Using a range of media such as print, audio, video, broadcast radio, television and, more recently, the new devices of the ICT world, open and distance learning for both adult basic education and non-formal education has been increasing in most parts of the developing and developed world. . . .

Huge numbers of individuals need quickly to be provided with basic education and the useful knowledge necessary to lead productive, healthy and dignified lives. Open and distance learning can be both economical and fast. They are an answer waiting for the question.

Unfortunately, neither NFE nor open and distance education are universally held in high regard. In many countries and in many people’s minds there are lingering suspicions that these are low-status, second-rate forms of education. The prime aim of this toolkit is to illustrate how to ensure that open and distance education-based NFE systems, programmes, products and services meet the required standards, and gain esteem and support by applying appropriate QA procedures.

In the literature on QA in NFE, very little has been written about QA frameworks and processes for NFE programmes delivered by means of open, distance, online or blended learning. In this toolkit, we take the reader step-by-step through the processes of planning, monitoring and evaluating NFE programmes to determine whether the required standards and expected outputs, outcomes and impacts are being achieved. International agencies, national governments, public and private donors, learners and all the other stakeholders involved with NFE expect optimum outcomes with constrained resources. It is therefore essential to provide strong and reliable evidence of what can be, and is being, achieved in terms of outputs, outcomes and impacts, and to assure return on investment. Presenting the quality of the inputs is not enough.

Defining terms

Not all readers will be familiar with some of the terms in this toolkit, so we first need to ensure that everyone understands these terms in the same ways. This will help us establish the criteria for defining quality in this field.

Rogers (1996; 2004) suggests a learning continuum of informal, self-directed, non-formal, and formal learning. In this continuum, the boundaries can be “fuzzy” but learning is the keystone, as shown in Figure 1 below.

Figure 1: The learning continuum



In considering how to plan for and provide NFE, it is important to consider these four forms of learning, how they interrelate, and their implications in QA. Let us look at these more closely.



Photo: Commonwealth of Learning (CC BY-SA) (Alison Mead Richardson)

A technical school belonging to the Dhaka Ahsania Mission in Bangladesh.



Photo: © Ian Pringle (CC BY-SA)

Girls gather in the studios of Namma Dhvani (“Our Voice” in the Kannada language). Located in a rural area of Karnataka State, India, Namma Dhvani was a community radio pioneer, beginning with its use of audio towers and cassette playback in the late 1990s and moving on to FM cablecasting and eventually to FM broadcasting in 2009.

Informal learning

A great deal of what we think, know and can do actually occurs through informal learning — by engaging in informal discussion, reading, listening to the radio, watching television and films, observing how other people do things, and so on. Such learning tends to occur in the home, the workplace, or some community setting, rather than in the formal classroom. It reflects our individual interests, needs and circumstances; it may not be intentional, and it may not even be recognised as learning.

Self-directed learning

Self-directed learning is more intentional. When we engage in self-directed learning, whether individually or collaboratively, we take responsibility for the what, where and how of our learning, and then plan and organise this learning. Knowles (1975) argues that people who actively engage in self-directed learning learn more and learn better than those who simply want to sit there and be taught. They also tend to retain and make use of what they learn — and they do this better and longer than purely reactive learners. However, undertaking self-directed learning does require certain knowledge and skills, without which independent learners may experience anxiety, frustration, and at the worst, failure. This is why they may need non-formal education, which provides the structure and support to help them achieve their educational or training needs outside the formal educational systems which they may not wish, nor be able, to enter.

Non-formal education

Non-formal education operates under a number of names, including adult education, continuing education, on the job training, accelerated training and extension services. It is organised to raise aspirations and realise human potential by providing opportunities for learning outside the formal education system. Unlike formal education, it may not be state-supported nor provided by for-profit institutions, and it does not necessarily lead to formal credit nor certification. It is more learner-centred than formal education, and indeed it has to be, because the learners can leave any time they lose motivation or feel they are not getting what they believe they need from the experience.

Hallak (1990) suggests that there are in fact four forms of NFE:

- Para-formal education: Evening classes, distance education programmes, etc. that provide a substitute for formal schooling or offer a second chance for those unable to attend regular schooling.
- Popular education: Adult literacy, co-operative training, political mobilisation, and/or community development programmes that are explicitly targeted to serve marginal groups.

- Personal improvement programmes: Cultural, language, sports and other programmes provided by clubs, associations and other organisations.
- Professional or vocational NFE and training provided by firms, trade unions, private agencies, etc.

In this toolkit, we are primarily concerned with the first and second of these forms of provision, and in particular, NFE in developing and middle-income countries that is concerned with:

- Literacy, numeracy and basic education for adults, out-of-school youths and school dropouts.
- Youth groups and social development.
- Community development/mobilisation.
- Gender issues.
- Developing practical skills and knowledge — for example, in crop science, animal husbandry, fishing, forestry, health and nutrition, water supply and sanitation, family planning, child care, nutrition, HIV/AIDS prevention, gender roles and equality, public safety and justice, reconstruction and reconciliation, computing, environmental, ecological and conservation issues, etc.
- Small-scale business and local enterprise skills development.
- Inclusive education for those with special needs who are currently excluded, so enabling them to become valued, contributing members of their communities.
- Teaching about democracy, human and civil rights, as well as constitutional and voting systems.
- Regional networks of community resource centres or telecentres.

NFE can mean different things in different countries and contexts, and the dividing line between non-formal and formal education is sometimes definitional rather than actual. And while NFE may operate outside formal education systems, as Singh (2009) observes, it needs to be considered within national qualifications frameworks because it is important to have systems in place for recognising prior informal and non-formal learning and providing pathways for certification and entry into formal learning systems. Many NFE learners may be simply seeking one-off, voluntary and uncredentialed learning, without any intention of progressing to formal education, but some may develop such an ambition, and without such learning pathways in place, NFE will simply be a low-status dead end. This is why in Africa some of COL's Flexible Skills Development programmes¹ in car mechanics, construction, HIV/AIDS management, clothing and fashion design, homecare management, early childhood development, and computing, run in partnership with the Commonwealth

¹ www.col.org/skillsdevelopment

Association of Polytechnics in Africa, offer credit or certification — not only providing immediate reward and recognition but opening up opportunities for further studies.

Formal education

Formal education is the hierarchically-structured and chronologically-graded education system we find in schools, colleges and universities. It is typically state-supported and state-operated, although some states allow private institutions to provide comparable education within their national qualifications frameworks and jurisdictions.

Rogers (1996) characterises the significant differences between formal and non-formal education as follows:

	Formal education	Non-formal education
Target group	Mainly young Universal Compulsory Selective	Mainly adults For those interested Voluntary Open
Timescale	Full-time Primary activity of the participants	Part-time Secondary activity of the participants
Relevance	Separate from life In special institutions In sole purpose buildings	Integrated with life In the community In all kinds of settings
Programmes	Run by professionals Exclude large parts of life	Participatory Exclude nothing
Curriculum	One kind of education for all Compartmentalised Subject-centred Controlled by teachers	Education to meet learner-defined needs Open curriculum Integrated and problem-centred Controlled by learners
Methods	Teacher-centred Mainly written	Learner-centred Much is oral
Objectives	Conformist Set by teachers Competitive Individualist	Promote independence Set by learners Collaborative Collective
Orientation	Future	Present
Relationships	Hierarchical	Egalitarian
Validation	Terminal at each stage Validated by the education profession	Continuing Validated by the learners



Photo: Commonwealth of Learning (CC BY-SA)

A Rural Women Development and Environmental Organisation (RUWDEO) workshop in Cameroon teaches women how to make soap for home use and sale in the markets.



Photo: © Oliver Zielke, www.yodigo.tv

Girls using the literacy application Yodigo on a Netbook, in the village of Edayapatty, in Tamil Nadu, India.

Adult education

Non-formal education is closely aligned with the concept of adult education. Adult education is specifically designed and provided for those over school-leaving age who, for whatever reason, have missed out on, or have dropped out of, formal education, but are still keen to learn more about matters relevant to their needs and interests. Adult education is again typically voluntary, based upon the assumption that the learners are self-motivated and know what they want from their learning. So adult learning programmes need to be immediately applicable to the learners' work or other needs and circumstances. They also need to recognise that adult learners bring knowledge, ideas and skills to the learning that they have gained from their earlier experience or education. The learners will expect these factors to be respected and taken into account. In adult education, just as in non-formal education, the providers have an obligation to allow the learners to participate in shaping the objectives, content and activities.

Basic education

Basic education is the term used to describe the formal, non-formal and informal learning that meets basic learning needs and lays the foundation for all subsequent learning. According to the International Standard Classification of Education (UNESCO, 1997), it comprises primary education and lower secondary education. In developing countries, basic education also often includes pre-primary education and/or adult literacy programmes.

Universal basic education is a human right, a high priority for developing countries, the focus of the Education for All movement (UNESCO, n.d.) and Goal 2: Achievement of Universal Primary Education by 2015 in the Millennium Development Goals (United Nations, 2010). Many studies show that not only does basic education develop knowledge and skills that translate into employment, empowerment and higher earnings, but it also can result in reduced spread of HIV/AIDS, prevention and medication of disease, lower maternal, infant and child mortality, improved nutrition, longer life expectancy, increased productivity in traditional sectors, and greater understanding of democracy, human rights, governance and non-violent ways of solving problems.

Highly contextualised and less highly contextualised NFE programmes

Rogers (2004) observes that NFE programmes can be “highly contextualised” or “less highly contextualised.” Highly contextualised programmes are created or selected for specific learning groups and have very specific objectives; the learner groups also may have a considerable role in the design of the curricula, teaching and learning materials, and delivery methods. Less highly contextualised programmes are based upon generally or universally applicable goals and outcomes, and their curricula and resources are designed or selected to be adaptable to the needs and circumstances of various learning groups.

Community learning, community development and social capital development

Some NFE programmes are designed to benefit communities rather than individuals. Community-focused NFE programmes can be concerned with such agendas as social mobilisation, political development, reducing poverty and increasing equity. They also operate on the basis that a community's capacity to think, plan and act is greater than the sum of the individual members' abilities, and that the current ways of thinking and behaving need to be challenged to ensure openness to change and continuous improvement. Closely aligned with this approach is the concept of "social capital" — achieving social cohesion and personal investment in the community. This term was first coined by Hanifan (1916, p. 130–131), who wrote:

If he [sic] may come into contact with his neighbor, and they with other neighbors, there will be an accumulation of social capital, which may immediately satisfy his social needs and which may bear a social potentiality sufficient to the substantial improvement of living conditions in the whole community. The community as a whole will benefit by the cooperation of all its parts, while the individual will find in his associations the advantages of the help, the sympathy, and the fellowship of his neighbors.

It needs to be borne in mind that education is never politically or culturally neutral. The influences of international bodies or national and local governments inevitably permeate every aspect of NFE, and some traditionally-minded communities may be fearful of education conflicting with their time-honoured indigenous beliefs and practices. They need to be reassured that the programmes are empowering rather than impairing and are relevant to their lives and needs, that their ideas and experiences are valued, that they can play a constructive role in the learning processes, and that the content, teaching and learning take account of the local mores and realities.

Such programmes can also foster a wider sense of community by encouraging collaboration between providers, local associations and community groups, local media channels, local institutions and other participants.

With globalisation and the advent of the Internet, the term "community" applies not only to groups of people in particular geographical locations but to members of "online" or "virtual" communities who share values and interests across physical boundaries. Individuals can also be members of "communities of practice," collaborating in addressing common sets of problems, generating ideas and practices, and seeking possible solutions. They can even be members of a "community of communities of practice" which harnesses different knowledge and skills in multiple communities of practice to address such major challenges as combating HIV/AIDS or protecting the environment.

Siaciwena (2000) states that NFE can be concerned not only with inculcating knowledge, values and skills that form the foundation for lifelong learning, but also

with people's attitudes and behaviour, and with motivating communities to take actions that will lead to improvements in their socio-economic conditions. Thus, there are close links between community learning and community development. The Scottish Government (2004) has developed three national priorities for community learning and development:

- Raising standards of achievement in learning for adults through community-based, lifelong learning opportunities that incorporate the core skills of literacy, numeracy, communications, working with others, problem solving, and information and communications technology.
- Engaging with young people to facilitate their personal, social and educational development and enable them to gain a voice, influence and place in society.
- Building community capacity and influence by enabling people to develop the confidence, understanding and skills required to influence decision-making and service delivery.

The Scottish Government argues that all of these should be governed by the following principles:

- Empowerment: Increasing the ability of individuals and groups to influence issues that affect them and their communities.
- Participation: Supporting people to take part in decision-making.
- Inclusion, equality of opportunity and anti-discrimination: Recognising that some people may need additional support to overcome the barriers they face.
- Self-determination: Supporting the right of people to make their own choices.
- Partnership: Recognising that many agencies can contribute resources and ensure these are used effectively.

The Wisconsin Department of Public Instruction (2008) suggests a slightly different set of principles for community learning and development:

- Self-determination: Local people are in the best position to identify community needs and wants.
- Self-help: People are best served when their capacity to help themselves is encouraged and enhanced. When people assume ever-increasing responsibility for their own well-being, they acquire independence rather than dependence.
- Leadership development: The identification, development and use of the leadership capacities of local citizens, which are prerequisites for ongoing self-help and community improvement.
- Localisation: Services, programmes, events, etc. that are brought closest to where people live have the greatest potential for a high level of public participation.

- **Integrated delivery of services:** Maximising the use of limited resources through collaboration and sharing by organisations with common goals.
- **Making maximum use of all available resources** — physical, financial and human.
- **Inclusiveness:** Involving the broadest possible cross-section of community members.
- **Responsiveness:** Ensuring that programmes and services respond to the continually changing needs and interests of communities.
- **Lifelong learning:** Recognising that learning begins at birth and continues until death, and helps people realize their potential and adapt to constant change.

Distance education

To reach out and serve learners who are separated by time or distance, or who are disadvantaged socially and economically, NFE can exploit a variety of open and distance teaching and learning methods and media. It can use print resources such as books, pamphlets, newspapers, handouts and posters, electronic media such as radio, television, computers and the Internet, and two-way communications such as telephony, audio- or videoconferencing, email and online chat. The methods, technology and media chosen depend upon costs, availability, and ease of use, as well as the learners' circumstances, cultures, and other factors. Distance education-based NFE for the majority of the world's poor tends to depend upon low-cost, scalable and commonly used technologies such as radio, combined with active learning in the form of question and answer sessions, group work, experiments and other hands-on activities designed to assure understanding and application of new knowledge and skills. However, as we show later in this toolkit, there are also new and increasingly used forms of provision, such as eLearning and mLearning.

eLearning

eLearning, or online learning, involves the use, wholly or in part, of the Internet, an intranet (local area network, or LAN), or an extranet (wide area network, or WAN) for course or service delivery, interaction, support or facilitation, assessment and evaluation. The advantages of eLearning are its convenience, flexibility and ability to provide rapid and inexpensive access to high-quality content and materials from anywhere in the world. However, not everyone has ready access to, or can afford, a computer and Internet connection. In addition, some people may be ill-equipped to use the technology and, without personal support, unable to bring the necessary self-motivation and self-discipline to this form of study.

mLearning

mLearning, or mobile learning, uses handheld or wearable technologies, thus making learning accessible virtually anywhere. This means of delivery holds great promise for bridging the digital divide because mobile devices are far more common and cheaper than computers in developing and middle-income countries.

Blended learning

Blended learning combines the traditional “classroom” or “face-to-face” methods of teaching and learning with CD-ROM, Internet-based or mLearning to achieve the most appropriate mix of presentation, interaction and “hands-on” learning.

Flexible learning

Flexible learning is essentially concerned with providing learners with choices in the where, when and how of their learning. This is very important in NFE because learning must never interfere with learners’ income-generating or domestic responsibilities. Face-to-face and computer-based classes must be arranged at times that suit the learners rather than the providers. Internet-based tools such as discussion boards or chat rooms, where these tools are available, can allow for asynchronous exchanges; mobile phones and other devices can be used anytime, anywhere by anyone who is on the move.

Learner-centredness

NFE programmes need to be learner-centred — they need to pay careful attention to the knowledge, skills, attitudes and beliefs that learners bring to the learning environment. Learner-centredness is linked with the theory of learning known as “constructivism.” This theory views learning as a process in which individuals



Photo: © Izzy Pitman

Learners can be involved in planning and creating NFE programmes. A volunteer reporter conducts an interview on under-age drinking in Keetmanshoop, Namibia.

construct meaning and understanding based upon their previous knowledge and experience. One form, known as “social constructivism,” emphasises the role of teachers and trainers, peers and family members, and others in the community in helping learners to master concepts that they might not be capable of understanding on their own. As explained earlier, rather than simply being passive recipients of programmes devised and presented by outside experts, participants in NFE programmes can also be involved in the planning and creation of the courses. They can even provide some of the content and resources in the course of their learning, as we show later in the case of Lifelong Learning for Farmers, supported by the Commonwealth of Learning.

Open educational resources

Open educational resources (OER) are courses, learning materials, streaming videos, tests, software, and other tools, materials or techniques that are made freely available on the Internet for any individual or group to use, and are licenced (via copyright, such as Creative Commons²) for unrestricted distribution and the possibility of adaptation, translation, re-mix and improvement. Most OER are currently more suited to higher education, and many are designed to be used by teachers and trainers to support learning, rather than by the learners themselves. But OER also have great potential for NFE in countries with very limited resources. For example, UNESCO has been promoting the introduction of OER in HIV/AIDS and literacy education in post-conflict and post-disaster situations. One of the problems with OER is helping people know what resources are available from what source and on what terms. To address this problem, UNESCO has launched the Open Training Platform³ to enable local communities and development stakeholders at the grassroots level to access training materials and resources created by development stakeholders at the global level.

Monitoring

Monitoring is a continuous process of collecting data against specified performance indicators at each stage of a programme, in order to report to the stakeholders and decide whether to proceed with the initiative or revise the planned and ongoing activities.

Evaluation

Evaluation is an in-depth analysis, usually undertaken at the final or advanced point in a programme’s cycle, designed to judge whether the intended intermediate or long-term results were achieved, and whether the programme should continue.

² www.creativecommons.org

³ www.opentraining.unesco-ci.org/cgi-bin/page.cgi?d=1

Quality assurance

Quality assurance (QA) is the systematic monitoring and evaluation of the various aspects of systems, projects or programmes in order to maximise the probability of standards being achieved for specified performance indicators. Harvey and Green (1993) suggest five interrelated ways of defining quality in the context of education:

- Excellence: Quality as something exceptional, distinctive and elitist.
- Consistency: Quality as a perfect, consistent or flawless outcome.
- Fitness for purpose: Quality as fulfilling pre-determined requirements, needs or desires.
- Value for money: Quality as return on investment.
- Transformation: Quality as enhancement and empowerment.

Outcomes- or results-based quality assurance

Outcomes- or results-based QA is, by definition, a process of continuous improvement. It can be applied at the macro level, to gauge the quality of NFE organisations and systems, and it can also be used to define, verify and meet stakeholder expectations of NFE programmes.

In this toolkit, drawing upon the approach adopted by OECD (2002a) and by OECD-DAC and World Bank (2007), we break down the outcomes into three types because these are often the terms used in development programmes:

- Outputs: the immediate effects of the programmes on individuals and groups.
- Outcomes: the achieved or likely short- to medium-term effects of the outputs; the observable behavioural, institutional and societal changes that take place over a period of time.
- Impacts: the longer-term, significant, structural, sustained and positive improvements in the lives and circumstances of those involved in the programmes.

QA

Part Two

Non-formal education — opportunities and challenges

NFE has enormous application in developing and middle-income countries. It provides second-chance schooling for those who have missed out on, or who have failed to complete, their primary or secondary schooling. It assists with poverty alleviation and income generation in disadvantaged communities, improving agricultural practices and environmental conservation, creating greater health, hygiene and childcare awareness, and educating people in issues of gender, human rights, civics, democracy, etc. Drawing upon Senge's (1990) ideas about what contributes to the creation of a "learning culture," NFE also helps to build "learning communities" by creating an environment that encourages individuals and communities to develop and realise their goals in partnership, and to engage in effort that will deliver lasting change.

NFE is provided by international and national donors, national, state or local governments, educational and training organisations, non-governmental organisations (NGOs), and religious, charitable or philanthropic groups. It is provided in a variety of contexts and settings and by a variety of means. It is typically part-time, delivered at times that suit the learners, and flexible in its delivery. Sometimes the content, approach and outcomes are determined by the learners rather than the providers. The groups can be formal and unchanging, or informal and constantly changing, depending on whether and how the programmes meet individuals' needs at particular times.

NFE can be provided face-to-face through village meetings, quizzes with prizes, workshops, field demonstrations, supervised practical work, talks, tutorials, counselling, study groups, home visits, and so on. It can make use of local trainers, facilitators, or community elders as well as outside expertise. It can be provided in the form of "infotainment," mixing information with entertainment in forms that are popular with particular audiences, such as television "soaps," community festivals, puppet shows and street theatre. It can also be provided through open and distance education. Here, there is still considerable reliance upon the more traditional media such as printed manuals for the local trainers, literacy primers and readers for the learners, post-literacy readers, self-study print materials, activity sheets, self-correcting assignments, picture books, posters and flipcharts, leaflets, community newspapers, newsletters and magazines with special "education pages," and reading clubs. But some NFE programmes make use of television and radio (sometimes in



People crowd around the eTUKTUK during a visit to Weliganga village, Sri Lanka.

association with phone-ins or organised listening groups), audio and video cassettes, and most recently, the Internet, computers and mobile telephones.

Considerable ingenuity can be shown in getting the new communication technologies out to rural communities. The Kothmale Community Radio project in the central hill region of Sri Lanka uses the eTUKTUK, a three-wheeled motorcycle equipped with a laptop computer, printer, camera, telephone and scanner, for community building and overcoming the barriers of language and illiteracy. Internet services are provided via a CDMA-enabled wireless connection and electricity is provided via a generator, which in turn charges a battery that is used to provide additional power for short periods of time. Narrowcast radio programmes are transmitted through two loud speakers mounted on the roof rack. The locations and times of the eTUKTUK arrivals in the villages are announced weekly by the radio station. This system not only brings education and information to local people who are unwilling or unable to access the radio studio due to caste, gender, time, or other cultural and logistical factors, but enables them to develop their ICT skills and plan, record and edit their own programmes. The eTUKTUK is supported by UNESCO in collaboration with MJF Charitable Foundation, Suntel, and Pan Asia ICT Research and Development Project (Grubb, 2006).

Unfortunately, while there are many outstanding examples of NFE programmes, as Perraton (2000) observes, NFE is often viewed as inferior or second-class education,

being provided for groups with low social standing, little political influence and little or no means of paying for their education. Spronk (1999) notes that NFE programmes tend to be provided on a piecemeal basis, established to meet the learning needs of particular groups in particular locations and at particular times, and operate on a small scale, with very limited resources and outside national formal education systems. There is often heavy reliance on short-contract staff or part-time volunteers whose educational experience and qualifications may be limited, and NFE programmes can wax and wane if there is not continuity in political, donor or funding support. As a consequence, NFE may be regarded as a moral obligation, but not a political nor an economic priority. Spronk (1999) concludes that the impact of NFE programmes has been very limited, and they have largely failed to meet the expectations and challenges of rapid social and economic development. Similar conclusions can be drawn regarding many applications of ICT in NFE. As Sulaiman, Kalaivani, Mittal, and Ramasundaram (2011) observe of India, numerous ICT experiments and pilot programmes have been conducted, many of which have provided some useful lessons, but most of these have been dependent upon donor or research project funding or even community budgets, and their scalability, sustainability and impact are still very much open to question.

NFE programmes need to be fully in accord with, and integrated into, the specific socio-cultural contexts within which they are being introduced. When developing countries strive for development, there can often be conflicts between the forces of tradition and the forces of change. Conformist, traditionalist beliefs, knowledge and practices may stand in the way of essential changes on the way to development. Alternatively, the new ways may be seen as positive and the old ways may have negative connotations, and it may be necessary to help the local people recognise the importance of their own local ideas and sources because these may actually work better than those of the external agencies.

It is important to determine which aspects of an NFE programme — for example, the timing, duration, location and logistics — are to be planned and implemented by the providers and which are to be decided upon and managed by the learning groups themselves. Vermaak (1985) observes that the successful planning of NFE programmes requires the horizontal and vertical integration of all activities, extensive community involvement, a self-help approach, the use of front-line workers and the maximum utilisation of existing facilities.

NFE also needs to make use of the local people's tacit and traditional knowledge — their unwritten, unspoken, internalised storehouse of knowledge based upon their emotions, experiences, insights, intuition and observations. This differs from their explicit knowledge, which is articulated, codified, and formalized, and can be stored in various media and readily transmitted to others. Local "know-how" should never be underestimated by the providers. Many community members may be totally unaware of their own potential to find answers to the challenges they face, so it is



Photo: Commonwealth of Learning (CC BY-SA) (Ian Pringle)

The Solomon Islands Ministry of Health and village media centres collaborate in developing community health education programmes. In the absence of landlines or mobile coverage, radio phones, like the one pictured, have been a critical part of the communication landscape.

important to encourage them to give expression to their ideas and show that this input is valued in reaching solutions to local problems. Invaluable knowledge, experience and ideas will be lost if there is an overuse of instruction, authoritative sources, and what is regarded as the “right information.” As Taifi (2006) observes, an overemphasis on explicit knowledge management leaves no room for tacit knowledge development.

Nonaka (1991) identifies four ways of creating knowledge:

- From tacit to tacit: Learning by observing, imitating, practising and socialising.
- From explicit to explicit: Combining separate pieces of explicit knowledge into a new whole.
- From tacit to explicit: Recording learners’ comments and discussions and then converting this tacit knowledge into explicit knowledge.
- From explicit to tacit: Reframing or interpreting explicit knowledge by using the learners’ tacit knowledge so that the new knowledge can be understood, accepted and internalised by others.

Providing opportunities for these methods of knowledge creation can help to improve understanding and motivation in learners. In addition, ICT tools such as mobile phones and the Internet can enable these exchanges to be achieved more conveniently, speedily and economically, and over greater distances.

QA

Part Three

Case studies of distance education-based NFE

Before we consider the issues of QA in NFE, it may be useful to examine some applications of open and distance education-based NFE because this will help us appreciate the kinds of inputs, outcomes and impacts that can be achieved and need to be reflected in the QA framework. It will be noted that throughout this document we continually refer to the need to start thinking at the very outset about the benefits that these NFE programmes are intended to bring to individuals, communities and local economies. It should never be assumed that certain outcomes will be achieved simply because certain inputs have been provided.

Basic education and literacy programmes

The 1990 World Conference on Education for All in Jomtien, Thailand,⁴ defined basic education as comprising literacy, oral expression, numeracy, problem solving, and the basic knowledge, skills, values and attitudes required to live and work in dignity, participate fully in development, make informed decisions, continue learning and enjoy a better quality of life. Formal basic education opportunities in pursuit of these goals are offered through open schooling systems such as the National Institute of Open Schooling, in India, and the Open Junior Secondary School, in Indonesia (Mishra, Jena, & Sadiman, 2011). Non-formal basic education for children, youths, and adults who were never able to enrol in, or who dropped out of, formal schooling can also be provided by religious, community and private organisations and, in the case of nomadic communities, mobile schools. As Edirisinha (1999) and Reddi and Dighe (2000) report, open and distance non-formal basic education in developing countries is an under-researched, unreported field of endeavour.

According to UNESCO (2011), over the past 20 years the adult literacy rate has increased by about eight percentage points globally — an increase of six per cent for men and ten per cent for women. In 2008, 64 per cent of the 796 million adults worldwide who were unable to read and write were women. Modern society depends upon the written word for almost all of its functions. Without literacy, people are doomed to a second-rate existence. So literacy is regarded as a fundamental right, the means for achieving Education for All and the Millennium Development Goals. Literacy is the foundation for lifelong learning, enhancing human capabilities,

⁴ www.unesco.org/education/pdf/JOMTIE_E.PDF



Photo: © The Citizens Foundation

The Citizens Foundation in Pakistan is an NGO that provides access to basic education and encourages female enrolment in the educationally deprived regions.

eradicating poverty and broadening participation in society. It provides wide-ranging benefits to individuals, families, communities and society as a whole.

Pressing the mass media into service in support of literacy may seem to be an appealing idea and may even achieve some short-term gains. There have been attempts to teach literacy by such means. In India, for example, subtitled the lyrics of Bollywood hit songs on television in the same language as the audio has been used to enable partially literate people familiar with the lyrics to anticipate and read the subtitles, so that hearing and reading reinforce each other (World Bank, 2011). But without human intervention and support, television offers only passive learning, and such programmes have been difficult to sustain over the long term.

Using distance education to train large numbers of literacy teachers and adult basic education staff, as conducted in South Africa and Kenya, has been found to be a more successful approach. And using blended learning — combining distance education, study groups and tutorial support — has also been shown to be more successful, particularly in cultures that place a high importance on face-to-face communication. This approach means that educators can take the students' learning styles, interests, and abilities into account in deciding which curriculum content, learning activities, products, learning environments, attendance requirements and pacing will best serve these students' needs. Using this approach, the Sudan Open Learning Organisation (SOLO)⁵ has provided non-formal literacy programmes in Arabic, English, Dinka,

⁵ www.unesco.org/education/en/literacy/EP_Sudan_BLSP.pdf

Nuba and Nuer, for tribal groups and displaced, war-affected and vulnerable illiterate communities in a country beset by conflict. The learners work in groups with the help of facilitators and learn through a “Discuss, Write and Do” methodology which encourages them to write about issues that directly concern them. SOLO also runs a post-literacy programme in which participants are invited to join reading and writing circles, identify and discuss their needs, and consider how to meet these with the help of the circle leaders. To date, this system has benefited 113,861 children and over 12,000 women, raised enrolments, and reduced dropout, gender and geographic disparities.

In Mongolia, the Literacy through Distance Learning Programme⁶ provides basic and advanced literacy skills training for out-of-school youths and illiterate or semi-illiterate youths and adults, particularly amongst rural-based nomadic families. The programme is designed to foster inter-generational learning, bringing young and old together to learn from each other. Learners whose basic literacy skills enable them to continue studying on their own or with the assistance of family members are issued with books, audio cassettes and CDs, and mobile facilitators monitor their progress and offer personalised assistance as necessary. Since its inception in 2004, this UNESCO-supported programme has provided literacy skills training to 3,500 illiterate and 4,500 semi-illiterate people a year. The adoption of a family-based approach has been found to foster positive social relationships and improve communication between parents and children, encourage parents to ensure that their children attend and stay in school, and help build social capital. It has also been shown that the learners’ newly-acquired literacy skills contribute to both self-development and securing livelihoods.

Post-literacy programmes

It is one thing to provide literacy programmes but quite another to prevent the rapid loss of knowledge and skills that occurs if the learners are unable to practise and apply their literacy skills once their courses end. One post-literacy project run by the New Delhi-based Nirantar Centre for Gender and Education⁷ is the award-winning “Khabar Lahariya” (“News Waves”). This weekly newspaper is written, edited, illustrated, produced and marketed by newly-literate dalit (“untouchable”) and tribal women who have been trained as journalists. Designed for an audience with low levels of literacy in deprived rural areas of Uttar Pradesh, the paper features national and international news, coverage of issues like schooling, marriage and healthcare, and investigative reporting into violence against women and issues concerning dalits (Nirantar, 2008).

In districts of Peru, in the wake of national literacy programmes, neo-literates have been served by 700 itinerant community libraries, each containing 100 books. In Brazil, a series of reading materials for neo-readers, produced through a National Literature for All Competition, was published within the Literate Brazil programme to

⁶ www.unesco.org/uil/litbase/?menu=8&theme=20&programme=51

⁷ www.nirantar.net/contact.htm



Project Alphabetisation de Base par Cellulaire (ABC) is a mobile phone-based literacy and numeracy programme in Niger, located in Sub-Saharan Africa.

reach over one million students by means of rural libraries, telecentres, and specially-trained librarians and “reading agents” (Torres, 2009).

In a UNESCO-supported NGO project in Pakistan, mobile phones were issued to 250 females who had undergone a month’s training in initial literacy skills. These phones carried 600 short message service (SMS) information pieces in Urdu on topics ranging from health and hygiene to religion (Miyazawa, 2009).

Project Alphabetisation de Base par Cellulaire,⁸ a collaborative initiative by Tufts University, Oxford University and Catholic Relief Services in villages in the Dosso and Zinder regions of Niger, provides a mobile phone-delivered module as a follow-up to the first-year conventional literacy classes in village centres. In this second year of the programme, multimedia phones and a digital curriculum enable learners to practise their literacy and numeracy skills and access timely, up-to-date and relevant market information in their local languages by means of voice calls and SMS (Jaschke, 2010).

⁸<http://sites.tufts.edu/projectabc>

The University of the Philippines Open University has also experimented with using SMS to provide informal learning modules on such topics as English spelling, English idioms, maths, health, nutrition, physical exercise, giving up smoking, and stress management. Text messages invited mobile users to test their knowledge on topics of interest. Those taking up the invitations were asked to answer matching-type questions. Those who performed well received congratulatory messages and were told they were eligible for certification. Those who got the answers wrong were advised to buy and study the specially-developed, very inexpensive, pocket-sized booklets on these topics, and then re-sit the tests. While the take-up in this initiative was not as high as hoped (possibly due to poor marketing), this project demonstrated that SMS can be an effective tool for informal public learning campaigns (Librero, 2006). Also in the Philippines, one of the Molave Development Foundation Inc.'s Project MIND (Mobile Technology Initiatives for Non-formal Distance Education) modules was "MIND Your English." This was concerned with self-expression, language and grammar, reading skills, and letter writing. It included a workbook, tests and quizzes, the results of which were fed back to the students so they could monitor their progress, and an audio CD to teach correct pronunciation and diction. Comparing the outcomes of those learners who then sat the high school exams, the mean per cent correct score of passers in the SMS group was found to be marginally higher than those in the non-SMS group (Ramos & Triñona, 2009).

Learners report that SMS-based learning makes learning more attractive. However, after analysing the evaluations of applications of mobile SMS for non-formal distance learning in the Philippines, Mongolia, Bangladesh and Thailand, Valk, Rashid and Elder (2010) conclude that while there is evidence that mobile phones impact educational outcomes by facilitating increased access, the findings are mixed regarding the extent to which mLearning promotes new learning.

While illiteracy hinders development, literacy on its own does not necessarily lead to development. Neo-literates need not only follow-up reading material but also post-literacy NFE to help them improve their lives. Rahman (2000) tells of one Pakistani family which had never been able to afford schooling for their five daughters, but when an opportunity arose for the eldest daughter to attend a female literacy class, she learned not only how to read and write but how to save money. Putting her newly acquired knowledge into practice, she saved for four months and qualified for a bank loan which enabled her to buy first one goat and then six more goats. As a result, not only did her family no longer need to buy milk from the market, but she could gain an income from selling the milk. She then interested her family in the idea of poultry-farming and helped them obtain financing to start this small business. It is by such means that NFE can help to halt the inter-generational spiral of poverty.

In another literacy and post-literacy project run by the Office of the Non-formal Education Commission in Thailand, the children and youths in one village came up with the idea of a "brain bank" in which villagers could deposit their ideas for community enterprises. A committee was formed, and villagers who formulated



Photo: © UNESCO

Rural people in Tes soum, Uvs province, Mongolia, being tested for their literacy knowledge and skills. UN Human Security Trust Fund project “Comprehensive Community Services to Improve Human Security for the Rural Disadvantaged Populations in Mongolia,” coordinated by UNESCO.

sound ideas backed by plans for repaying their loans were enabled to undertake such activities as growing chemical-free vegetables and raising cattle. A professional accountant was hired to help develop a bookkeeping system and a knowledge management system for the brain bank. Finding that foreign visitors were interested in staying in their community to learn more about their lives and culture, the villagers constructed a guest house and Buddhist meditation centre; they also created a website featuring the village’s attractions and showing how to make traditional herbal medicines (UNESCO Bangkok, 2005).

Such cases show that providing literacy opportunities for the younger members of communities can lead them to empowering and benefiting their communities and involving the older generation in change.

English language programmes

NFE is also used to bring English — the international language of business — within the reach of millions of non-anglophones on low incomes. Mastering English is widely recognised by ordinary citizens in countries such as Bangladesh and India as a valuable means of securing a better job and improving their children’s social mobility. In fact, often it is the poorest citizens who lobby most strongly for opportunities to learn English.

A multiplatform approach to English language was adopted in the 2009–2011 BBC World Service Trust and BBC Learning English Janala (“Window”) project in Bangladesh. This was part of the wider nine-year (2008–2017) English in Action (EIA)⁹ initiative designed to develop communicative English language skills for 25 million Bangladeshis. EIA is funded by UK aid from the Department for International Development and also involves the Ministry of Primary and Mass Education, Ministry of Education, Government of Bangladesh, BMB Mott MacDonald, BBC World Service Trust, The Open University and two national NGOs: Underprivileged Children’s Educational Programme and Friends in Village Development Bangladesh.

The BBC World Service Trust’s contributions to the EIA involved mobile telephones, a local newspaper, television and the Internet. Adults interested in learning English were enabled to access 140 two- to three-minute bilingual audio lessons by dialling 3000. Partnership with the mobile phone companies resulted in a 75 per cent reduction in the cost of voice and SMS calls — meaning that each lesson cost less than a cup of tea from a Dhaka tea stall. The learners could track their progress in learning English by accessing interactive audio quizzes. They could also record their own stories in English. The first nine months of Janala saw almost three million calls, with a high rate of repeat users. A dedicated website¹⁰ was also launched, enabling users to access free content and join an online community of learners. The country’s largest newspaper, *Prothom Alo*, offered lessons in print linked to mobile and web content three times a week. A weekly youth entertainment television show was broadcast in a prime-time Friday evening slot, featuring comedy sketches, cartoons and discussions on subjects of current interest. And a serial drama was also devised, supported by a parallel half-hour programme which helped the audience to apply the English words and phrases used in the drama. The rollout of this project was preceded by considerable market and potential user research. Users are being monitored to gain a sense of their experience and the relevance and outcome of the lessons, and rigorous QA frameworks are being applied so that the reach, practice and impact of EIA will gradually be extended over the next few years (BBC World Service Trust, 2009; GSMA Development Fund, 2010; Trucano, 2010).

Another example of using mLearning for English language purposes is MobilEdu, a Nokia/Pearson joint venture in China. This offers English language learning materials and other educational content from a variety of providers. Customers can access this content through an application preloaded on new Nokia handsets, or by visiting the service’s mobile website or other WAP portals in China (Wauters, 2010).

Yet another mLearning initiative is Nokia Life Tools, in India. As well as offering health, agriculture and education information through this system, Nokia also provides English language programmes designed to act as springboards to help small-town and rural youths move into the employment market. Nokia has recently entered into an agreement

⁹ www.eiabd.com/eia

¹⁰ www.bbcjanala.com



Photo: © Alan A. Reiter

Indian market researcher and blogger Dina Mehta (right) interviews Umesh Haumant (centre), who is using Nokia Life Tools to learn how to speak English, in Kurudwadi, India.

with Indira Gandhi National Open University regarding an English certification course for which Nokia will provide the study support (Satyanarayanan, 2011).

Gender-responsive and transformative programmes

The gender gap in primary education is narrowing in many countries, but 54 per cent of all out-of-school children are girls. This is generally attributable to parents placing a low value on their daughters' education because of cultural norms or because these girls are needed to work in the home or supplement the family income in some way. The child development agency Plan (2008) estimates that the economic cost to low- and middle-income countries of failing to educate girls to the same standard as boys amounts to a staggering USD 92 billion a year, or just less than the USD 103 billion annual overseas development aid budget of the developed world.

A dramatic example of how NFE can result in women's empowerment and major social change is illustrated in the outcomes of a programme mounted by Tostan.¹¹ Tostan (which means "breakthrough" in the West African language Wolof) is a U.S. NGO whose mission is to empower African communities to bring about sustainable development and positive social transformation based on respect for human rights.

¹¹ www.tostan.org

Working primarily in remote regions, it provides holistic, participatory education for adults and adolescents who have not had access to formal schooling. In 1997, a group of Senegalese women from the village of Malicounda Bambara who had participated in this programme stood up before 20 journalists and declared their decision to end the practice of female genital cutting (FGC), a centuries-old tradition in their community. The knowledge they had gained in classes on human rights and health had led them to make this momentous decision. By 2011, over 90 per cent of the 5,000 Senegalese communities estimated to practise this harmful tradition had publicly abandoned it, along with child/forced marriage, and hundreds of communities in Guinea, The Gambia, Burkina Faso, Somalia and Mauritania had joined the Malicounda Bambara women in this movement.

Tostan takes a respectful approach to development. It allows the villagers to arrive at their own conclusions and lead their own movements for change. The programmes enable the participants to learn about and discuss their human rights to health and freedom from all forms of violence, and the responsibilities they share in protecting these rights within their communities. In the sessions on health, they consider the harmful consequences of FGC, and ways of preventing short-term and long-term health problems. A wish to end FGC is not a requirement for participation in the programmes, and in any case, because FGC is linked to marriage opportunities, abandonment requires a collective decision by intra-marrying groups. However, Community Management Committee members and other participants travel to other communities, raising awareness about what they have learned in their classes. Thus, entire communities across regions can decide to end FGC without having directly participated in the Tostan programme (Tostan, 2010).

In using ICT for NFE, it is important to consider the relationship between the digital divide and the gender divide (Balasubramanian, Thamizoli, Umar, & Kanwar, 2010). Reporting on the use of ICT for the empowerment of women, Sulaiman, Kalaivani, Mittal and Ramasundaram (2011) report that women have benefited from access to Indian radio and television programmes containing information on socio-economic development, agriculture, health, rural employment, environment and e-governance. In most cases, the women can only be passive recipients of generic information and advice, but with the expansion of community radio in recent years, phone-in “ask the expert” programmes are enabling this medium to become more interactive and locally relevant.

Nath (2001) suggests that the starting point for any successful gender-entrenched knowledge networking should be the development of relationships that make it easier for women to talk about their needs, share information and work together. The Internet ought to provide opportunities for this. But in many parts of the world, women’s ownership and access to communication technologies is low. Social and cultural norms, economic circumstances and heavy domestic responsibilities mean that they are less likely to own radios or telephones, or have the same opportunities

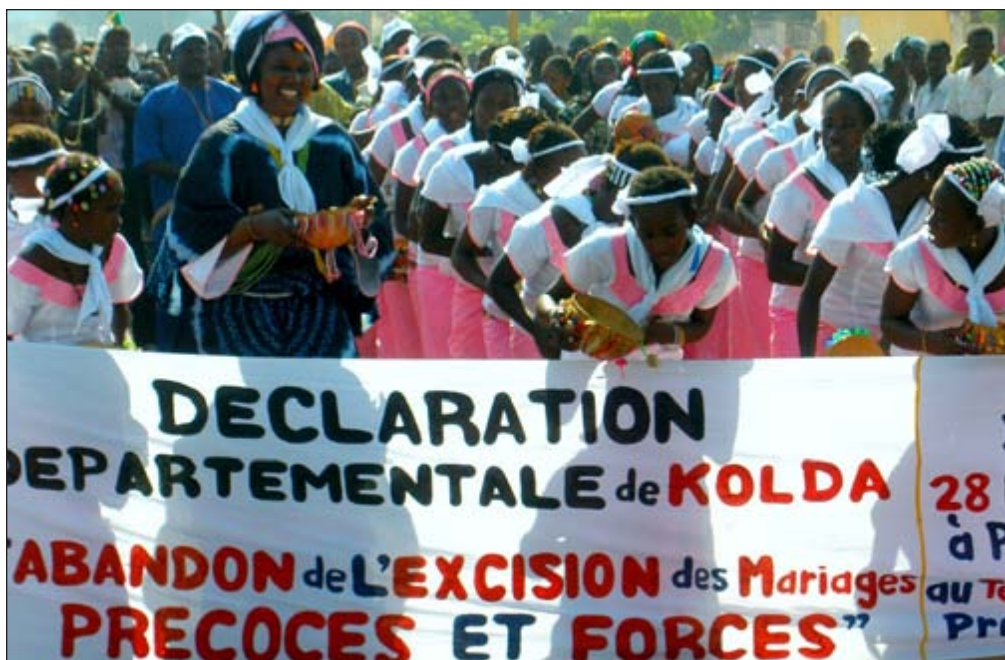


Photo: © Tostan

On November 28, 2010, 700 communities in the department of Kolda, Senegal, publicly declared their abandonment of harmful practices, including female genital cutting (FGC) and child/forced marriage. At the march held before the ceremony, local girls celebrated their communities' commitment with dances and songs.

as men to access the Internet at home or in public kiosks or Internet cafés. And as the FAO, IFAD and World Bank (2008) testify, rural women are particularly disadvantaged in making their voices heard in ICT communications.

COL regards women's empowerment and gender equality as central to its "learning for development" agenda, and gender mainstreaming is an integral part of all of programmes.¹² Studies by COL indicate that course materials often reflect a traditionally male construction and ownership of knowledge. The "invisibility" of women in course materials can uphold stereotypical beliefs about the learning styles of men and women. Drawing on studies by Green and Trevor-Deutsch (2002), COL (2002) stresses the need not only to address the barriers to women's access and use of ICT but to ensure the relevance of content and methodology by:

- Valuing women's knowledge, wisdom and experience.
- Using participatory methods to design and develop the content and learning systems to reflect the lives of women.
- Building on traditional communications methods.
- Ensuring that the content is directly relevant to women's livelihoods.

¹² www.col.org/resources/micrositeGender/Pages/default.aspx

- Considering local language content.
- Overcoming literacy barriers through the appropriate design and use of ICTs.
- Using gender-appropriate instructional designs.
- Using gender-appropriate learning strategies.



Sakena Yacoobi

Women themselves can become empowered to bring about change, at the individual level and the societal level. As a child in Herat, Afghanistan, Sakena Yacoobi saw many women suffer. They had no education and little or no medical care, and many died in childbirth. She later became a professor and health consultant in the U.S., but what she witnessed when visiting Afghan refugee camps in Pakistan in 1992 persuaded her to return to her homeland. At that time, the Taliban controlled most of Afghanistan and girls were not allowed to attend school. So she started up the Afghan Institute of Learning,¹³ serving Afghan women and girls in the camps and risking her life to

set up 80 secret schools in Afghan homes which were attended by 3,000 girls. Using interactive, learner-centred methods, which are a radical departure from traditional teaching methods in Afghanistan, the women and girls are helped to think critically, apply logic to problem solving, and interpret and evaluate information. Sakena Yacoobi's Institute has trained more than 15,000 teachers and, through travelling clinics, has provided health education for half a million women. It also invites men as well as women to discuss the Koran's teachings on the equality of the sexes.

NFE can also enable learners to consider the role expectations and stereotypes that contribute to underachievement, sexual violence, teenage pregnancy and other social problems. The International Planned Parenthood Federation (2010) provides case study evidence of such NFE initiatives. One case concerns a United Nations Population Fund project in Namibia, designed to educate men about women's reproductive health and alert them to the unequal power relations that characterise health inequalities. Pastors, male nurses, defence officers, police officers, soccer club managers and coaches, and members of the Namibia Defence Force were provided with manuals on family planning, gender equity, gender-based violence, unsafe sexual contact, and family responsibilities and communications, and given training in sexual and reproductive health and HIV/AIDS prevention. They in turn trained others in their peer groups, and these trainers were then charged with educating men in these matters using whatever communication channels were available to them, including printed materials, video clips, person-to-person contacts, group meetings, drama performances, and other outreach activities. The evaluation of the project after this two-year programme revealed a diminution of gender-based violence, increased knowledge on the prevention of sexually transmitted infections, including HIV, and a

¹³ <http://afghaninstituteoflearning.org>



Photo: © Ian Pringle and Rupantar Institute for Folk Theatre

A performance of a Pot Song, a traditional Bangla cultural form, about maternal and child health, at the Rupantar Institute for Folk Theatre (Khulna, Bangladesh).

decrease in HIV prevalence amongst pregnant women. Similar programmes have been conducted in Benin, Bangladesh and Indonesia.

The Men's Leadership Programme offered by Women for Women International¹⁴ was designed to prevent rape as a weapon of war in the Democratic Republic of Congo. The team responsible for this programme first made contact with community organisations and leaders to gain an understanding of the various power structures and groups most influential in shaping social norms and attitudes. They also surveyed around 400 men of high standing in their communities to assess their knowledge and attitudes regarding sexual violence and women's status and rights in society. In addition, they consulted with other organisations and women's groups to identify the priority issues for the training. They then developed training resources based on the Women for Women International manual, *Community, Responsibility and Effective Leadership: A men's manual*, selected seven leaders in the targeted sectors (government, religion, traditional, the police and military and civil society) and trained them in a five-day workshop. Each leader was then charged with identifying ten to fifteen other men of influence within their particular communities and providing them with training. These men in turn were encouraged to identify ways to continue outreach in their own spheres of influence. The programme also involved the formation of working groups with male and female citizens, and a public awareness campaign. An

¹⁴ www.womenforwomen.org/global-initiatives-helping-women/assets/files/MLP-fact-sheet.pdf



Photo: © WAND

The University of the West Indies Women and Development (WAND) unit makes a community presentation on HIV/AIDS.

external assessment of the programme’s impact, conducted through focus groups and interviews, revealed some profound attitudinal and behavioural changes at household and community levels. A similar programme was mounted in Liberia, again with positive outcomes.

Yet another issue that can be addressed through NFE is women’s leadership training for democratic governance, development and conflict resolution. One organisation providing such programmes is the Women and Development Unit (WAND)¹⁵ of the University of the West Indies Open Campus. WAND’s work is guided by a focus on the ways that class, race, gender and culture combine within a patriarchal and socio-economic system of capitalism to ensure and perpetuate the subordination of women. Going beyond the simple concept of “equality” in development, it helps employed, unemployed, low-income and disabled women to understand their rights, develop advocacy skills, make themselves heard, take control of their lives and develop community-based, income-generating projects that make them independent. Its programmes have also concerned parenting, pre-schooling, violence against women, rural development, women and disaster management, computing/Internet, training trainers in reproductive health, women and religion, and HIV/AIDS (WAND, 2009). WAND partners with other women’s organisations, NGOs and community groups to

¹⁵ www.cavehill.uwi.edu/Wand/page1.htm

provide a participatory approach to education, information resources and networks to promote women's issues (Soares, 2006).

Vocational education, skills development and unemployed youth programmes

As Nagarajan (2005) observes, youths represent up to 85 per cent of human capital in the developing countries, yet the majority remains unemployed or underemployed. With limited education, narrow economic, social and political opportunities, and little or no marketable skills, these teenagers can easily become involved in armed conflict, prime targets for recruitment by gangs, drug traffickers, rebels, warlords and militia, and a burden to their families.

NFE can improve the employment or self-employment prospects of unemployed youths who have not enrolled in formal schooling or who have dropped out from the formal system. However, as Nagarajan (2005) points out, identifying the appropriate training requirements for youths can be a challenge. Conventional skills training may not be effective unless the providers understand the market needs, and can identify and provide training tailored to the age cohort, gender and environment.

Vocational, skills development and unemployed youth programmes can be provided by the formal sector, skills centres, companies, NGOs and volunteers. As an example of a formal provider, India's Indira Gandhi National Open University has a mandate to provide non-formal vocational, skills development and entrepreneurship training for underprivileged and unreached people in the North East Region. These programmes are provided through a mixture of lectures, hands-on training, field visits, practical work, video and television, eLearning and a call centre. The vocational skills programmes include auto mechanics, ICT (the operation of multimedia systems, information systems and call centres), electrical maintenance, printing, weaving, tailoring, and agriculture (including watershed management and rain water harvesting), and low-cost house-building using bamboo. The general skills programmes include personal development, writing and communication skills. These programmes give the participants the ability to help improve their socio-economic circumstances as well as the motivation to become more entrepreneurial and financially self-dependent (Khare, 2010).

Some programmes link unemployed youths with skills training centres or with companies that train and certify them and try to match them to labour needs. Other programmes provide enterprise development training and access to micro-finance so that their graduates can find means of self-employment.

In the Philippines, the U.S. Agency for International Development (USAID) and the Philippines Department of Education's Quality and Access for Learning and Livelihood Skills (EQuALLS2) provide livelihood courses for out-of-school youths in Mindanao, a region of religious differences, political conflict, displacement and



Out-of-school youths at a Community Learning Centre in the Philippines (EQuALLS2).

poverty which has the lowest school completion and success rates in the Philippines. The EQuALLS2 courses include subjects such as food processing, traditional arts and crafts, rubber technology, plant propagation, and fish processing, preservation and marketing; they also help the learners develop interpersonal, creative-thinking, problem-solving, decision-making and conflict-resolution skills. EQuALLS2 also provides job placement schemes and start-up funding for micro-enterprises (USAID Philippines, 2011). EQuALLS2 illustrates how NFE can depend upon partnerships. USAID collaborates not only with the regional arm of the Department of Education, but also with the Philippines' Technical Education and Skills Development Authority, International Youth Foundation, Petron Foundation, Synergeia Foundation, Save the Children, the Education Development Center, Brother's Brother Foundation and National Book Store Foundation (which supply the textbooks), and Microsoft (which trains the public elementary school teachers in basic computer use).

Between 2005 and 2010, the International Youth Foundation Education & Employment Alliance (EEA),¹⁶ supported by USAID and an array of partners, provided training and employment opportunities for out-of-school, at-risk and unemployed youths in Egypt, Morocco, India, Indonesia, Pakistan and the Philippines. In India, the EEA supported innovative educational technology initiatives. In other countries, it offered learning packages combining technical, vocational and life skills, entrepreneurship development, on-the-job training, and job placement or enterprise development support. Over 29,000 youths participated in the skills training programmes, more than 26,000 (87 per cent) completed their training, and of the 8,580 graduates eligible for employment, 4,801 (56 per cent) secured jobs or set up their own small businesses. Eighty per cent of these young entrepreneurs reported making profits. In the coastal communities of West Java, Indonesia, this EEA programme helped to strengthen the fish filleting industry by providing the necessary capital, equipment and training. As a consequence, some 20 local previously

¹⁶ www.iyfnet.org/EEA

unemployed youths were trained as machine operators, and within a few months, this project created 250 additional local jobs, most of which were taken by women and youths previously living in abject poverty.

In another case of youth education leading to local enterprise development, the Chawama Youth Project, supported by the International Institute for Communication and Development,¹⁷ has helped several hundred young Zambians develop skills in such areas as auto mechanics, welding, carpentry, tailoring and ICT. The training centre has also evolved into a small ICT-based enterprise, generating income by introducing new designs downloaded from the Internet, marketing its products online, establishing a Community ICT Resource Centre, opening up a music recording studio for the use of the general public, and offering secretarial and communication services for the community. The success of this project has led the Ministry of Youth Development to offer these young entrepreneurs 5.6 hectares of land to continue with their current work and extend their activities to include agriculture and tourism (IICD, 2011).

Programmes for the disabled

For the majority of people struggling to make a living in the developing countries, life is hard enough. It is even more difficult for the disabled. Their employment prospects are limited, they are regarded as having little potential to contribute to society, and in some cultures their disability is regarded as a punishment for wrong-doings in a previous life and they are stigmatised. Hiranandani and Sonpal (2010) observe that it is difficult to quantify the number of persons with severe impairments in the developing world because they are often excluded from censuses and surveys, but recent estimates are that 85–90 per cent of the global population of those with disabilities resides in the developing countries. For the vast majority of these unfortunates, social protection or government interventions are not a reality. As Hiranandani and Sonpal (2010) observe, the situation is made even worse by the global neo-liberal trend to reduce the burden on state resources by placing the onus for generating resources and providing services on the private sector and community. This approach leaves philanthropic and donor agencies to fill the breach by providing NFE for the disabled.

For families struggling to meet their daily basic needs, a disabled child is a heavy economic and social burden, and schooling for such children is often considered a waste of time and valuable resources. One example of NFE provision for mainstreaming physically disabled children is a programme in Phnom Penh, Cambodia, established by AusAID, the Marist Mission Centre, and the Marist Brothers of Australia. Many of the children in this programme have disabilities due to polio or poorly managed fractures, and some have mild cerebral palsy. Others are amputees — the victims of landmines or inadequate medicine. Some are orphans and some were formerly street beggars. The non-formal “catch up” or accelerated schooling provided

¹⁷ www.iicd.org/projects/zambia-cypro



Photo: © FAO

A fully commercial mushroom farm was established at the premises of the Northeastern Training Centre for People with Disabilities, in Ubon Ratchathani.

in this programme is designed to compress six years of primary schooling into one or two years. To achieve this, the school day is two hours longer than in regular government schools and the children study throughout the two months when the regular schools are on holiday. The programme's sponsors hope to encourage the Cambodian Ministry of Education to replicate this model of schooling for physically disabled children in other parts of the country (AusAID, n.d.).

However, Powers (2008) observes that in many parts of the world, the trend is away from special needs programmes in specialised institutions and towards integration with mainstream programmes delivered to the disabled and non-disabled alike. Such inclusive vocational training is seen as more effective and sustainable, and as better integrating people with disabilities into their communities.

In southern India, the Animators for Rural Multipurpose Development Society (ARMDS)¹⁸ was founded in 1985 by students working as volunteers in local villages. Operating with limited funding, this small NGO provides training in sought-after skills in a community-based skills centre for disabled and non-disabled people, including those at the very bottom of India's highly-stratified social system — the dalits. The courses are government-approved and lead to recognised certificates and access to conventional institutions that also assist with the course design. Job placement and follow-up programmes are also organised. ARMDS reports that approximately 40 per cent of its graduates have managed to get jobs, 15 per cent have

¹⁸ www.wecaretoo.com/Organizations/IND/armdsorg.html

started their own businesses, five per cent have started work in a family enterprise or farm, and two per cent have gone on to further education and training (ILO, 2008).

Another example of this approach is Digital Divide Data (DDD)¹⁹ in Phnom Penh, Cambodia. DDD prepares marginalised people, including disabled people, orphans, and women who have been victims of trafficking, for IT employment. It is contracted by U.S. and other academic archives, libraries and company indexes to digitise their data. The employee-trainees work on these data entry and digitisation projects for half of the day, and learn in the education programme of their choice for the rest of the day. DDD also provides healthcare, eye care and scholarships. The employee-trainees are paid below market rates because the idea is to encourage them to move into other, higher-paid jobs as IT instructors, translators, administrators, etc. as soon as they are ready for this. The fact that this enterprise is based on advanced technology sets it apart from the traditional sheltered workshops that typically focus on very low-level work skills (ILO, 2008).

NFE for the disabled can also focus on self-enterprise and self-sufficiency. In another Cambodian example, the ILO Alleviating Poverty through Peer Training project²⁰ adopted a methodology called “Success Case Replication” (SCR). This involved successful village-based micro-business operators or entrepreneurs acting as peer trainers and mentors, helping disabled people develop the technical and management skills to run micro-businesses. The trainers, trainees and project field workers who supported the peer trainers reached agreement on the training and associated fees (some of the peer trainers agreed to offer their services free), and the field workers and trainers then helped the trainees acquire the skills needed for a successful business start-up and develop a business plan. The project also provided grants and loans to those trainees who were unable to secure credit through other channels but whose business plans met the necessary requirements. This project trained 800 people, many of whom were women with disabilities or affected by disability in their families. Around 70 per cent of the participants had a disability that affected their mobility, while 15 per cent had a visual disability. A total of 609 (60 per cent of whom were women) started their own micro-businesses. Another 126 enhanced their existing businesses as a result of participating in the project. Disabled graduates from the project also went on to train other disabled people. The ILO concluded that the SCR methodology is simple but sits well with the particular skills development needs of disabled people in rural localities in developing countries. It capitalises on the human resources found at the village level and it cuts through barriers of accessibility, attitudes and lack of services. The learning-by-doing approach suits people with certain types of disabilities and those with limited education. The project replicated the skills and practices of businesses known to be succeeding, but ensured that markets were not flooded by too many businesses offering the same kinds of products or services (ILO, 2008).

¹⁹ www.digitaldividedata.org/cambodia

²⁰ www.ilo.org/public/english/region/asro/bangkok/ability/download/cambodia-1.pdf

The United Nations Food and Agriculture Organisation (FAO) is another provider of training and support for the disabled. In Thailand, a FAO-initiated Mushroom Production Training for Disabled People project²¹ was undertaken in Ubon Ratchathani. Mushrooms were favoured because they offer good market opportunities, being part of the daily Thai diet, and mushroom houses can be started at a very low cost, generate income within a short time, and can be cultivated by physically and/or mentally disabled people. The objectives of this project were to help the rural disabled become economically self-sufficient, ensure replication and sustainability following the training, and strengthen the capacity of the local institution in training those with special needs. Forty-seven trainees successfully completed the 60 days of training, went home, transferred their know-how to their families and community, and set up their mushroom houses. They became sufficiently self-reliant to be active participants in their communities, and five of the trainees returned to the centre to become trainers themselves. As a further demonstration of self-confidence, six disabled trainees married and established a joint enterprise (SDdimensions, 2000).

Agricultural development programmes

Agriculture is the principal means of livelihood for 70 per cent of the world's poorest people. Many of these are smallholder farmers, herders, fishers and forest-dwellers living in countries that face particular challenges in achieving the Millennium Development Goals, have limited capacity to respond to natural and human-induced disasters, and have undernourishment in a high proportion of their populations (FAO, 2005). One of the contributing factors to developing countries' underperformance in agriculture is that 43 per cent of the agricultural labour force is women who lack equal access to the knowledge, skills, resources and opportunities needed for increased productivity. This is why the FAO (2011) makes such a strong case for addressing gender issues in the agricultural sector.

Distance education-based NFE can help farmers in developing and middle-economy countries to adopt new practices, increase cropping intensities, and diversify into higher value commodities. Programmes can be delivered face-to-face, or by using printed materials, radio and television, mLearning and eLearning. Each of these methods has its advantages and disadvantages that need to be considered within the context of the particular environments and target populations. As in other applications of NFE, many such initiatives have succeeded as pilot projects, but have then proved to be unsustainable or capable of replication once donor funding has ended.

Infrastructure, access and costs are critical factors, but participatory and empowering approaches — identifying the stakeholders, understanding their circumstances, needs and interests, and involving them in the programme planning, implementation and evaluation — are also critical to the success of such interventions (McLean, 2001). As David and Asamoah (2011) observe, the newer and more successful approaches

²¹ www.fao.org/sd/PPdirect/PPre0072.htm

to extension methods are demand-driven and implemented through a variety of institutional arrangements involving state institutions, private sector agencies, farmer organisations and farming communities.

Using a “Listen-Discuss-Act” methodology, radio farm forums or radio clubs have had a long history in agriculture extension. One example was the *Zambian Farm Forum* run by the National Agricultural Information Services of the Ministry of Agriculture, Food and Fisheries. Thirty-minute agricultural knowledge, information and skills broadcasts in English and local languages were listened to by rural subsistence farmers organised in groups of 15. The literate members of these groups took notes, and the farmers then discussed what they had heard and decided if and how they were going to apply the new practices. Discussion reports and questions raised by the groups were sent to NAIS headquarters and responded to in subsequent radio programmes. When this approach was evaluated, it was found that many of the farmers had changed their agricultural practices and increased their yields. Their new-found knowledge and skills had been applied to soil conservation, agro-forestry, water ponding for reclaiming parched and unproductive country, building and strengthening contour ridges, crop rotation and winter ploughing, and constructing more durable crop storage barns. The programme also led to changes in gender attitudes and behaviours. Recognising that their wives also stood to benefit from these programmes, the farmers encouraged them to join in the forums and apply their new learning, imbuing them with a greater sense of importance and self-worth (Sibalwa, 2000).

A similar approach was adopted in Farm Radio International’s *African Farm Radio Research Initiative*. Weekly radio programmes featuring farmers’ voices dealt with farmer-selected improvement methods for achieving food security goals. A survey of 2,000 farmers across the five Sub-Saharan countries involved in this project found that 30–40 per cent of those surveyed had implemented the newly recommended methods, while in some places implementation was almost 80 per cent (Ward, 2010). One of the radio programmes’ producers commented, “We have discovered that the farmer is the best researcher and what we need to do as broadcasters is collaborate with them and never go in with an ‘I know it all’ attitude” (Farm Radio International, 2010). Farm Radio International has also launched *Farm Radio Weekly (FRW)*.²² This service provides rural radio organisations in Sub-Saharan Africa with news and resources relevant to the needs of small-scale farmers, ideas for and links to further research into the issues, and information about upcoming events and training opportunities. FRW is delivered to the stations’ email inboxes every week, and the FRW website also enables broadcasters to share their thoughts and ideas about issues and best practices.

Video viewing clubs can be organised in similar ways. Surveying Ghanaian women farmers who had been trained in cocoa integrated crop and pest management by this interactive training method, David and Asamoah (2011) found that it was a relatively inexpensive but effective means of providing low-literacy populations with

²²<http://weekly.farmradio.org/topic/news-review>

skills, information and knowledge on complex technical topics. The video viewing clubs comprised groups of 20–25 farmers who met weekly or biweekly for several months and were led by trained facilitators. During the sessions, these viewing groups watched videos presenting field demonstrations of production practices, and the local facilitators used illustrated guidebooks to stimulate and support discussions on these practices. While there was found to be no significant difference between the video club participants' and a control group's practices in cocoa growing and pest management practices, the interactive video-based training was found to have significantly improved the farmers' understanding of the topics covered and their sense of ownership of the new learning.

The fisheries sector in Viet Nam employs millions of people and accounts for four to five per cent of gross domestic product. The government wished to increase the number of fishery technicians by 20 per cent between 2000 and 2010, and create jobs in aquaculture for two million people. In a two-year project, Canada's International Development Research Centre (IDRC) helped Fisheries College No. 4 use eLearning to present short courses for those working in the aquaculture industry in rural and remote regions. The IDRC was assisted in this work by the College of the North Atlantic in Canada, a leader in the design, development and delivery of distributed learning in rural and remote areas. The students were enabled to receive theory and supplemental information through online delivery and interact with their instructors and other students by email as well as online discussion groups and chat rooms. They participated in the laboratories and hands-on components in face-to-face mode. The evaluation concluded that while the Internet availability at that time was below optimal bandwidth, there was sufficient connectivity to allow the courses to run, and to prove that this blended learning approach was practical, effective and efficient. By the measure of the final examination grades, student achievement was very good. Student satisfaction surveys showed that the pilot programmes were well received. The learners reported that they felt they had acquired the necessary knowledge while saving money and time. The college found that it was able to use its instructors' time more efficiently while fulfilling its mandate, and that there was increasing demand for more such courses (IDRC, 2005).

COL has been facilitating a Lifelong Learning for Farmers (L3F)²³ initiative, designed (1) to build the capacity in small farmers, landless labourers and marginalised rural communities to develop value-added farming and more sustainable use of natural resources, (2) to strengthen their ability to cope with the changes brought about by globalisation and (3) to ensure food and livelihood security.

Starting in 2004 as a pilot project in four villages in southern India, L3F has met with such success that it has led to similar initiatives in other parts of India, as well as in Uganda, Kenya, and most recently, Papua New Guinea. L3F employs distance education, mLearning and eLearning to help farmers organise themselves to gain

²³www.col.org/progServ/programmes/livelihoods/L3farmers/Pages/default.aspx

new knowledge; improve their farming practices, business planning, produce marketing and food security; raise their living standards; reduce their dependence upon government; and gain freedom from commercial exploitation. Daniel and Alluri (2006) explain that a fundamental principle for L3F is to avoid top-down planning and unidirectional communication. L3F involves:

- Helping rural farmers form associations and work to realise their own visions of development for their communities.
- Identifying leaders and training the trainers within these farming communities.
- Facilitating the horizontal transfer of knowledge, as opposed to the more traditional centralisation of knowledge creation and vertical knowledge transfer.
- Drawing on the support of agencies with expertise in agriculture, veterinary science, open learning and technology, who provide content and support where needed and, more importantly, verify the farmers' findings, training content and materials.
- Setting up ICT kiosks and facilitating the use of mobile phones by striking deals with telephone operators, so farmers can access agricultural learning materials, market and weather information, and local and regional agricultural news.
- Involving commercial banks, which provide loans to farmers on favourable terms if they can show that they have increased their knowledge, capacity and productivity.

L3F uses the farmer participatory research (FPR) approach, which the International Rice Research Institute/International Wheat and Maize Improvement Centre describes thus:

[FPR] involves encouraging farmers to engage in experiments in their own fields so that they can learn, adopt new technologies and spread them to other farmers. With the scientist acting as facilitator, farmers and scientists closely work together from initial design of the research project to data gathering, analysis, final conclusions, and follow-up actions. This step, sometimes known as “innovation evaluation” is essential for communication as well as for initiating diffusion. The main advantage of this approach is that farmers “learn by doing” and decision rules are modified on the basis of direct experience. To shape learning, interpretations of experience must provide information about what happened, why it happened and whether what happened was satisfactory or unsatisfactory. (IRRI/CIMMYT, 2008)

L3F has resulted in more profitable crop cultivation, improved dairy production, the establishment of successful goat-rearing enterprises, improvements in meat yield and honey collection, greater awareness of market opportunities, and enterprise development by women. The participants in this programme have also been trained in developing multimedia materials using digital photography and PowerPoint, to



Photo: Commonwealth of Learning (CC BY-SA)

A woman receiving training in goat rearing via her cell phone in Tamil Nadu, India.

the extent that the farmers in Tamil Nadu are now able to manage their own training website, using their own experiences, findings, voices and images to persuade others of the merits of their new approaches.²⁴

In India and Uganda, L3F farmers now operate their own mLearning system, producing one-minute generic training “granules” that are downloaded onto farmers’ mobiles (five granules a day constitutes a chunk; 25 chunks become a lesson; five lessons become a module and two to three modules make up a course). The use of the recorded voice rather than text avoids the problems of illiteracy, and makes it easy to translate the material into the multiplicity of languages and dialects involved, and change, extend and update content.

The experience to date is that computers and the Internet are most likely to be used for extension work by managers and agri-businessmen who already use this technology for administrative purposes, or, as Sudaryanto (2011) found in East Java, by the younger generation of graduates. However, L3F shows that the ubiquity of mobile phones raises further exciting possibilities. Extension educators and faculty at the University of Illinois have produced one- to two-minute animated videos that low-level literate farmers around the world can watch over and over again on their cell phones. These videos can be shared by agricultural extension agents who download the files from the Sustainable Development Virtual Knowledge Interface (SusDeVikiSM)²⁵ site and then deliver them to mobile users. These step-by-step demonstrations are enabling farmers in Niger to learn how to protect their crops from insects, village entrepreneurs in Mali to extract the oil from shea seeds to make

²⁴ www.l3farmerstamilnadu.com

²⁵ www.susdeviki.illinois.edu/Default.aspx

butter for sale at local markets, and growers of cowpeas in Sub-Saharan Africa and Asia to process the fruits of the neem tree to produce an insecticide to spray on their crops. The use of animation reduces the costs, allows the videos to have near-universal appeal and circumvents the need for literacy in the farmers. Aid workers, farmers, entrepreneurs and an animator collaborate in the scripting and design of these videos, and the voice-overs can be matched to any particular country or language group (Ulbricht, 2011; Yates, 2011). Such new approaches to sustainable development education can reach much larger audiences than traditional methods — and at a fraction of the cost.

Atkins, Brown and Hammond (2007) observe that with the advent of the open educational resources (OER) movement, teaching, learning and research resources that reside in the public domain, or have been released under an intellectual property licence permitting their free use or re-purposing by others, have a great potential for extension in remote and rural communities at little or no cost. OER Africa, established by the South African Institute for Distance Education (Saide) to play a leading role in driving the development and use of OER across all education sectors on the African continent, provides OER for agriculture and agribusiness,²⁶ but these resources are currently more suited to trainers and researchers rather than marginalized and resource-poor farmers. As Ivins (2011) observes, OER barely reach those at the bottom of the economic pyramid and indeed are barely comprehended by would-be beneficiaries around the globe. He argues that not only must localisation be improved for OER to reap effective learning gains for rural people in developing countries, but there must be local involvement in the customisation of content for local needs.

Healthcare, childcare and welfare programmes

In Singapore, Sweden, Norway and Japan, the mortality rate per thousand amongst children less than one year old is five. In the UK, Australia, New Zealand and Canada, it is six. In Liberia, it is 157, in Afghanistan, 165, in Haiti, 169, in Angola, 170, and in Sierra Leone, 182 (Thuriaux, 2011).

In the developed world, life expectancy at birth is 75 years. In the less developed countries it is 64 and in Africa it is 54 (*Encyclopedia of Death and Dying*, 2011).

The main causes of illness and death in the developed world are cancer and diseases of the respiratory, cardiovascular and nervous systems. In developing countries, the main causes are communicable diseases: respiratory infections, HIV/AIDS, infections at birth, diarrhoeal diseases, and tropical diseases such as malaria (WHO, 2010).

In 2009, 30.8 million adults and 2.5 million children were living with HIV, some 2.6 million people became infected with HIV, including an estimated 370,000 children, and there were 1.8 million deaths from AIDS-related causes. Sub-Saharan Africa is by

²⁶www.oerafrica.org/agricultureoer/ResourceResults/tabid/1562/mctl/Results/modid/4331/Type/GlobalSetType/all/keywords/agriculture/actualkeywords/agriculture/Default.aspx

far the region most affected by the AIDS pandemic; with just over ten per cent of the world's population, it is home to 68 per cent of all people living with HIV, a total of 22.5 million (AVERT, 2011).

Lack of education and failure to take health precautions contribute to the burden of disease. Easton, Sidikou, Aoki, and Crouch (2003) observe that in public health campaigns in general, and in regard to the HIV/AIDS pandemic in particular, the provision of information by itself is insufficient. Far greater “buy-in” is required in target populations. Their active participation in eradication efforts is needed — those affected must “take charge.”

There is clearly a great potential, as yet far from fully realised, for distance education, media and health organisations to use NFE to raise awareness of the causes and prevention of disease and ill health. Pridmore and Yates (2006) argue that there is a real need and opportunity to radically rethink ways of delivering HIV/AIDS education, and suggest that distance education and ICT could play a much greater role in such reforms. One example of this is shown in the international Music Television (MTV) Staying Alive campaign,²⁷ which is the world's largest HIV mass media awareness and prevention offensive. To get its messages across about HIV prevention and safer lifestyle choices, and to fight the stigma and discrimination associated with the pandemic, this campaign uses televised concerts, documentaries, public service announcements and a 13-language website featuring celebrities talking about safe sex. In doing so, it gives careful consideration to cultural contexts and sensitivities. For example, when this campaign was mounted in Senegal, it was felt that the TV programmes would make audiences look rather than think, that the settings and references were too western, and that the images and things said were far too explicit for the conservative Senegalese society. So a different approach was adopted. The local radio stations invited people from AIDS associations, youth groups and women's associations to suggest story ideas, and to come on air and talk about HIV and how to curb it. A famous Senegalese rap singer with his own radio programme offered to devote part of his programme to AIDS, inviting guests into the studio to talk about the virus and answer listeners' questions on air. The local radio stations organised games, giving away Staying Alive t-shirts, caps and scarves as prizes for correct answers to questions about HIV/AIDS. One community station sponsored skits at festivities, where young people played out the roles of ordinary Senegalese in facing the pandemic. In these ways, the campaign respected the Senegalese culture and gained the consent and participation of community and religious groups, both Christian and Muslim. The social workers and nurses reported that people enquiring about HIV were more relaxed because of what they had heard on the local radio stations (USAID, 2005; Savariaud, 2004).

UNESCO Bangkok has supported the use of radio dramas to teach minority ethnic communities in the uplands of the Mekong region about HIV/AIDS, drug abuse

²⁷ www.staying-alive.org/en



Photo: Commonwealth of Learning (CC BY-SA) (Ian Pringle)

Women involved in a learning group listen to “Bag of Life,” a community learning programme about maternal and child health, run in Mchinji, Malawi.

and human trafficking. These radio dramas are written in local languages by native speakers, are based on intensive research into life stories that audiences can really identify with, and have been found to be an effective vehicle for reaching young people, who are frequently unresponsive to public service announcements or didactic programmes. The programmes are accompanied by local music, emphasise the cultural richness of ethnic groups and are broadcast by the local radio stations or through community loudspeakers. Tapes and CDs are also made freely available for the use of communities and health workers (ADB, 2007).

COL’s Healthy Communities²⁸ involves community-based open and distance learning NFE programmes in Jamaica, India, Kenya, Tanzania, South Africa, Malawi and Solomons concerning:

- Maternal and child health.
- HIV/AIDS awareness, treatment and literacy.
- Malaria, TB, diabetes and other major illnesses.
- Life skills: parenting, conflict resolution and understanding gender.
- Healthy lifestyles: nutrition, moderation and fitness.
- Healthy environments: waste management and sanitation.

A variety of groups are involved in developing and delivering these programmes. In Malawi, the COL-supported child and healthcare programme involves the

²⁸www.col.org/progServ/programmes/livelihoods/Pages/default.aspx

MaiMwana Project (a community-based maternal and child health NGO), the Mchinji District Health Office (Malawi Ministry of Health), the Mudzi Wathu Community Radio Station, which provides 30-minute weekly Phukusi la Moyo (“Bag of Life”) programmes, which take their name from a local proverb (“everyone should jealously protect their own bag of life”), and over 200 grassroots women’s groups which have formed listening and learning clubs (Pringle, Rosato, & Simbi, 2009). In the Solomons project, the partners include the Ministry of Health – Health Promotion Division, Isabel Province Health Services Department, Isabel Province Education Department, Ministry of Education Distance Learning Centres, UNESCO Child Friendly Schools Programme, Pacific Open Learning Health Network, Solomon Islands Development Trust, and Solomon Islands Broadcasting Corporation. Schools, women’s groups, as well as health and education agencies participate in making the programmes, and youth groups assist in dramatising health messages (Leeming, 2009).

In other countries and contexts, HIV/AIDS educators make use of exhibitions, videos, puppetry, street theatre, pamphlets, booklets, public meetings and cultural events. However, they face a massive lack of awareness, and long-held cultural attitudes and prejudices regarding sexual behaviour. So they know that for the pandemic to be decreased, peer-education programmes in local languages and taking account of cultural perspectives are vital to increasing HIV/AIDS awareness. One such programme operates in Tamil Nadu, India. It is jointly run by the Rural Unit of Health and Social Affairs at the Christian Medical College and Hospital and by the University of South Australia. The peer educators are trained not only in the HIV/AIDS topics but in understanding, respecting and responding to community attitudes, values, beliefs and behaviours. Equipped with booklets, pamphlets and flash cards, they give lunch break talks in community centres, bus stations, factories, farms or anywhere else where people feel comfortable. They also make house-to-house calls to distribute leaflets and talk with families, organise night-time information videos and street play performances, and conduct surveys to find ways of improving HIV/AIDS education in the local communities (RUHSA Department, 2000).

In the Philippines, an IDRC Pan Asia Network project has helped the Molave Development Foundation’s Water, Sanitation and Hygiene Education (WASH)²⁹ project, which provides informal, distance education hygiene programmes in urban slums and rural areas, and has progressed from using magazines, comic books and posters to eLearning (Baggaley, 2004). When the project was conducted in a remote community on Mindanao, one of the Philippine islands, the community had computers, printers, scanners and Internet access via dial-up connections, but because the telephone service was somewhat unreliable, the learning modules were provided both online and on CD-ROMs. Assistance was provided for first-time computer users and technical support was also made available. Pre- and post-tests revealed improvements in knowledge and attitudes regarding personal hygiene, eating habits,

²⁹ www.molave.org/WASH.htm

drinking water, and personal health protection. Focus group discussions revealed that most of the participants were keen to share their new learning with their families and neighbours, and encourage them to learn about WASH through ICT (Ramos, Nangit, Ranga, & Triñona, 2007). McDonald (2009) concluded that while it might be problematic to replicate this project across the country's 7,100 islands, many of which have little or no advanced telecommunications infrastructure, the cellular technology that is now so prevalent in the Philippines may provide the means of serving these widely dispersed communities.

mLearning clearly has great potential to provide online health education, information and awareness campaigns. The World Health Organisation (WHO, 2011) observes that almost 90 per cent of the world's population could benefit from the opportunities presented by mobile technologies, and at relatively low cost, but that the health sector has been slow in adopting mobile technologies to help patients and providers alike. The Bangladesh Rural Advancement Committee³⁰ has developed interactive audio courses for distribution over mobile phones. These five- to seven-minute courses focus on such health-related topics as clinician-assisted birth, proper hand-washing techniques, the dangers of indoor smoke, and HIV transmission. The learners listen to the pre-recorded content and answer prompts during the call, such as "press 1 if you think you should . . .," "press 2 if you should not . . ."; the listener's selection determines which audio segment is played next. At the end of the call there is a short quiz on the material presented, and if callers get all the answers right, they receive credits to make personal calls on their mobile phones.

The ZMQ Freedom HIV/AIDS Initiative in India³¹ uses Internet-based community systems, intranet systems, stand-alone computer programmes, and hand-held and mobile devices to educate children, youths, adults, women, workers, sex workers and migrant labourers on communicable, non-communicable and lifestyle diseases. Believing that "play-and-learn" is one of the most effective methods, the providers create awareness of and teach about HIV/AIDS through games that can be played on mobile phones. On the very first day of its launch, ZMQ reached over 9 million handsets. Later on it reached 42 million handsets and within 15 months, 10.3 million game sessions had been downloaded. ZMQ provides these games absolutely free. There are four games, each targeting a different kind of user. One is based on a village cricket match in which runs are scored on the basis of knowledge of the HIV/AIDS awareness and safety messages. One involves competing in a quiz with a village boy who is extremely knowledgeable about HIV/AIDS. One is in the form of a chase between the player and the HIV virus. The fourth requires the player to save a dove of peace from HIV viruses in the sky by correctly answering questions.

The Praekelt Foundation³² in South Africa uses mLearning to teach young Africans about HIV/AIDS, health, sex, relationships and life in an entertaining and interactive

³⁰ www.brac.net/content/about-brac-bangladesh

³¹ www.freedomhiv aids.in/FreedomHivAids.htm

³² www.praekeltfoundation.org/young-africa-live.html



Photo: K. V. Srinivasan. © Kasturi and Sons Ltd., The Hindu Archives

Participants at a youth festival to create awareness on HIV/AIDS in Chennai, India.

way. In addition to providing static content — information from NGOs, helpline numbers, contact details for referral organisations, news and celebrity gossip — the project also offers dynamic content; this takes the form of blogs written by young people who provide peer learning in such matters as dating, falling in love, sex, cultural dilemmas, gender stereotypes and other issues relevant to this age group, as well as live chats with doctors and relationship experts. Even though this project became known only through word of mouth, it took off immediately.

Yet another interesting application of mobiles is offered by TulaSalud³³ in Guatemala, an organisation that leverages this technology for the delivery of healthcare services in indigenous communities. Using the local Mayan languages of Pocomchi or Q'eqchi', TulaSalud trains health workers and communities about natural medicines, nutrition, recognition of high-risk pregnancies, post-partum care, respiratory infections and HIV/AIDS. Using mobile phones, TulaSalud is also able to monitor disease outbreaks in real time, based on the data aggregated from patient consultations; send text message alerts and reminders to its “tele-facilitadores” using SMS; and deliver remote health training via mobile-based audio conferencing. Every month, the tele-facilitadores link the mobile phone messages sent by TulaSalud to

³³ www.tulasalud.org

a conferencing unit equipped with speakers and a microphone, and community members gather at the main office to listen and ask questions of the facilitators (Bhavsar, 2011).

Civic education, human rights, citizens' rights and responsibilities, and democracy activism programmes

The ACE Electoral Knowledge Network (n.d) suggests that there is still great need in many parts of the globe for education on:

- Civic knowledge, including the principles and development of constitutional democracy.
- Civic skills, including intellectual and participatory skills and their practice.
- Civic virtues, such as responsibility and respect for others.

The Network reports on a number of countries that are providing civic education nationally by means of NFE. It argues that if a country is going to encourage and promote civic education, it is essential to have a champion capable of drawing in other stakeholders. In Kenya, an internationally-funded civic education programme was prepared after a national assessment of citizens' attitudes and educational needs, and was delivered (largely through printed media) by 70 NGOs coordinated by a small management office. A similar undertaking in Malawi depended upon community educators and community libraries, while in Uganda a programme was developed by the election management board itself.

The Network also notes the constraints on achieving quality in such contexts. With programmes having to be provided in so many varied settings, there can be problems with the various languages and cultural characteristics, the appropriateness of the approaches and materials, the availability and reliability of the human and technological support, and the learners' differing levels of entrance and interest. The costs of nationally produced curricula and materials can be high and the wastage rates can be considerable, as the materials quickly lose currency and may need to be supplemented or replaced by locally produced courses and courseware. The training must often be provided at short notice, reducing the possibility of appropriate pre-existing materials being to hand. And despite the use of cascade-based training, it is inevitable that employing a range of educators and facilitators will result in a diversity of standards and styles.

Many of the NFE programmes in democracy, civic education, and human and citizens' rights are supported by international agencies. Amnesty International's Rights Education Action Programme (REAP) involves local partners in assessing local needs, selecting human rights topics relevant to the target groups and human rights agendas in the various countries and cultures, and training human rights education "multipliers" — individuals who, through their roles or positions in society, are able to



Photo: © David Leeming (2010), Isabel Learning Network (CC BY-SA)

Stanley Maneh, broadcaster at Susubona Community FM station, Isabel Province, Solomon Islands.

influence people. REAP uses non-formal settings such as community groups, youth groups and local forums to inform people about their rights and the rights of others (Amnesty International, 2010).

In Haiti, America's Development Foundation (ADF, 2011) has supported local organisations in developing national and local channels for educational campaigns on democracy and citizens' rights and responsibilities, as well as regional and national dialogue and advocacy training. ADF has also developed and delivered its own programmes. Its weekly radio series, Ann Pale/Ann Koute ("Let's Listen/Let's Talk"), on Haiti-Inter, a popular AM and FM station that reaches most of the country, focuses on topics ranging from the value of civil society organisations to women's issues. In Iraq, ADF has also supported local agencies in civic education activities and mass media campaigns reaching hundreds of thousands of people. These have included (1) a 32-episode "Our Constitution" talk show on nation-building, televised on al-Iraqiya TV, a series which brought unfettered constitutional debate into almost every Iraqi household, and (2) "Elect for Iraq," 90-minute episodes of often dramatic exchanges between office seekers and voter representatives across the political spectrum.

World Movement for Democracy (n.d.) reports on other initiatives across the world. In the Democratic Republic of Congo, the Centre Chrétien pour le Développement des Paysans en Milieu Rural (Christian Centre for the Development of Rural Farmers) operates out of the South Kivu region (the epicentre of that nation's violence and ethnic

conflict), promoting human rights and peaceful coexistence and aiming specifically at youths. Its campaigns include theatre performances, radio programmes, community meetings, and civic education seminars. In Nigeria, the Civil Liberties Organisation has trained democracy activists who educate citizens about their rights, civic society, and peaceful problem solving. Its education programmes are conducted through a variety of means, including radio, television, leaflets and meetings. In Sierra Leone, the Forum for Democratic Initiatives (FORDI) has worked to ameliorate the effects of the civil war. FORDI has compiled three civic education handbooks for free distribution to groups in that country: *The Sierra Leone Constitution Made Simple*; *Understand How the Courts Work*; and *Know Your Rights and Duties When Dealing with the Police*. It has also produced a series of radio programmes to complement these handbooks.

In Palestine, the Palestinian Centre for Helping Resolve Community Disputes strives to empower Palestinians and create a more democratic, participatory, and non-violent society. Its projects include youth-targeted educational television programmes on human rights and conflict resolution, and capacity-building workshops for local NGOs.

In the Middle East and Africa, the Women's Learning Partnership (WLP) provides leadership training programmes for women that emphasise skills in power sharing, conflict resolution and peace building. WLP makes culturally appropriate use of radio, video, Internet and CD-ROMs. During one workshop in Cameroon, the participants drew up an action plan for the formation of a local radio station to broadcast programmes on women's rights and peace building. WLP also published *Toward a Compassionate Society* (Afkhami, 2002), an anthology focusing on women's roles in conflict resolution, peace building and democracy within a culturally and politically diverse world.

In Ecuador, the private, not-for-profit Fundación Futuro Latinoamericano has responded to the need for new leaders in Ecuador by providing programmes in which youths can learn about leadership styles based on transparency and social participation, and by creating local youth councils in the various municipalities. These councils were recruited and empowered by means of ICT — most notably in the form of public “information corners” at locations readily accessed by local youths and, more recently, Web 2.0 tools. Initially, it was a struggle to win the hearts and minds of these young people because they had no interest in learning and no idea about the possibilities of the Internet, but the project has come to benefit thousands of young Ecuadorians. The creation of the youth councils also met some resistance from the municipalities, which saw these groups as a potential threat, but gradually their attitude changed from that of opposition to that of cooperation (IICD, 2010).

Emergency, conflict zone and displacement education programmes

Bender (2011) observes that most emergency, conflict zone and displacement aid takes the form of “life-saving services,” but education is also an important and life-sustaining service in such circumstances. The 2000 Dakar World Education Forum, which led to the objective of Education for All (EFA) by 2015, pledged to “meet the needs of education systems affected by conflict, natural calamities and instability.” UNESCO (2011) observes that regions riven by conflict are one of the reasons that the world is not on track to achieve the six EFA goals that over 160 countries in 2000 pledged to achieve.

Armed conflict and its aftermath have had a major impact on human development in many parts of the world, ranging from Liberia, Angola, Sierra Leone and Sudan to Afghanistan and Nepal. In Uganda, after 17 years of incursions by the Lord’s Resistance Army, children who have been abducted and abused, girl mothers, and sex workers need help to catch up on the education they missed and to become well-adjusted and fully functioning members of society. Similar needs arise in refugees and the internally displaced in eastern Chad, and children across Pakistan’s northern areas where Islamic extremists have destroyed or severely damaged schools in their campaign against education for girls.

Reviewing peace-building efforts in various Commonwealth countries, Baksh, Munro and Robb (2009) remind their readers that working to prevent or mitigate violence or to rebuild communities with violent histories is very difficult, often dangerous work:

Communities that have emerged from a violent past often face a situation where not only has physical infrastructure crumbled, but also the whole education system has lain dormant for years, with a generation of children having had no education. Community centres, schools and universities, which would normally provide the spaces for ODL, may have been destroyed. The exodus of teachers and community leaders may further compound the problem. In addition, those engaged in violent conflict tend to have various grievances, including marginalisation from access to education, employment, productive resources and other opportunities for social, economic and political advancement. (p. 2)

Of the tens of millions of people displaced by conflict, 60 per cent are reckoned to be children. Over 40 per cent of out-of-school children are in the world’s protracted conflict zones, as are some of the largest gender inequalities and lowest literacy levels. Yet Irina Bokova, Director-General of UNESCO (UNESCO, 2011, p. i-ii), observes:

When I visit communities in countries affected by emergencies, I am often struck by the extraordinary efforts they make to maintain education. Unfortunately, aid donors do not match that resolve. The education sector

currently receives just 2% of humanitarian aid — and the humanitarian aid system itself is underfunded. All of us involved in the Education for All partnership need to make the case for putting education at the centre of the humanitarian aid effort . . . we need to unlock the full potential of education to act as a force for peace.

Sinclair (2002) suggests that building or restoring access to education, including NFE, after conflict, disaster or the displacement of people should be a high priority because it provides hope for the future. The truth of this observation has been borne out by NFE projects in conflict zones such as Guinea, Sierra Leone and Sudan, where it has been shown that combining basic education with conflict-resolution and peace-building initiatives can contribute to personal healing, reconciliation and reconstruction (McCaffery, 2005).

Conventional formal education systems simply cannot cope with crises on such a scale and here again, distance education can play a useful role. At the height of the political conflict in Namibia in 1981, when large numbers of Namibians fled into Angola and Zambia, international assistance enabled these host countries to establish the Namibian Extension Unit, which provided literacy and basic education through print, correspondence and audiocassettes. And in the 1990s, when the civil war in Somalia forced the closure of many schools, a weekly radio programme on the BBC World Service, print materials and community-nominated teachers were used to provide literacy, numeracy, and life skills, as well as programmes on health, human rights and the environment that focused on issues close to the experience of Somalis. Just over 10,000 people registered as learners, 70 per cent of whom were women, and 9,600 passed the examinations (Tuckey, 2003).

UNICEF has developed a teacher's emergency pack, the School-in-a-Box, and a Recreation Kit. The School-in-a-Box is designed to support a rapid resumption of learning activities for children in crisis situations. Housed in an aluminum case, it provides the basic resources for one teacher to teach 80 students (in double-shift classes of 40) in an improvised classroom within the first 72 hours of an emergency. It comprises a locally developed teaching guide and curriculum materials in the local language(s), educational toys, and musical instruments. It is designed to be useable in all cultures — for example, the exercise books have no margins so they can be used by pupils writing either left to right or right to left. A blackboard can be made by painting the aluminum box with paint provided in the kit. The Recreation Kit was developed in recognition of the importance of sports and play in addressing trauma amongst children affected by war or natural disasters, and contains both indoor and outdoor sports equipment. These resources have proved invaluable in countries such as Rwanda and Sri Lanka. They provide a fast, portable way of re-establishing schooling, allow children to focus on something more positive and enable the adults to go about the business of rebuilding with greater confidence.



Photo: © UNICEF/NYHQ2005-0304/Josh Estey

Children at Ketapang Dua Aceh Besar School unpack educational materials from a UNICEF School-in-a-Box, in Banda Aceh, capital of Aceh Province. UNICEF is supplying School-in-a-Box kits for 560,000 tsunami-affected children in the country.

Following the December 2004 tsunami, UNICEF's Regional Office for East Asia and the Pacific provided an Indonesian version of the School-in-a-Box and Recreation Kit in Aceh Province. These resembled the standard UNICEF issue, but also included children's backpacks, primary textbooks, drawing books, mathematical teaching tools, hygiene/health items and local games. During 2005, in conjunction with the Ministry of Education and Provincial Education Ministry, UNICEF and its partners distributed 6,940 School-in-a-Box kits for 555,200 children in shelters and 4,365 Recreation Kits for 349,200 children, some of which had to be delivered by boat or helicopter. This intervention was subsequently evaluated for its efficiency, effectiveness, impact, relevance and sustainability. It was found that a few items in the kits were inappropriate, that there had been logistical problems, and that the often untrained teachers could have been given more information about the kits' contents and how to use them. But the overall feedback from the many organisations and teachers involved was that the kits had been useful, and that the process had provided them with better understanding of people's needs and the best ways of meeting these (UNICEF, n.d.).

Bender (2011) notes that donor fatigue, short-term funding cycles, and the politicisation of funding mechanisms stunt progress towards such effective and sustainable education interventions. Diversified attempts to build governance capacity at multiple levels, all the way from parents to ministries, are necessary to ensure education will survive and persist even in times of conflict, and even in “failed states.” But she also notes that despite initially positive impressions of some interventions, the results of the emergency education measures taken by the International Rescue Committee (IRC) in the Democratic Republic of Congo are mostly anecdotal. IRC staff reported that it was hard to measure and quantify the outcomes, and thus difficult to build these into funding and advocacy strategies. Bender observes that the donors know the education system in this nation is failing and have been reluctant to fund education projects. So once again, it is vital to quantify and qualify outcomes so as to build stronger evidence that can be communicated to current and prospective donors.

Peace education programmes

NFE can also be used to help promote a culture of peace in areas of conflict. Peace education can be treated as a subject in its own right or it can be embedded in other studies.

The UNESCO-PEER (Programme of Education for Emergencies and Reconstruction) Peace Education Package was initially contextually designed to introduce Somali children and their parents and communities to the concept of non-violent solutions to conflicts, and create new energies for peace. The training was spread over one year, and included activities for the community at large. This package has also been used in Eastern Africa’s Great Lakes Region and can easily be modified for use in other countries. It comprises a teacher’s handbook, a booklet containing twenty stories teaching the values of cooperation, friendship and consideration (each with follow-up activities), another booklet and tape recordings of songs about living with others, a card game about human rights, a board game in which every peace-related move is rewarded with an advance and every non-peace-related move means the player has less chance of winning, and other teaching aids and materials (Aguilar & Retamal, 1998).

The Gender and a Culture of Peace project³⁴ has been implemented in areas affected by the Mindanao conflict in the southern Philippines. Peace education lessons were integrated with literacy classes for thousands of learners from all religious and ethnic backgrounds. The classes were designed to encourage peace-building activities that were culturally-sensitive and relevant. Distance education modules were broadcast by community radio stations to reach those without access to these classes.

³⁴ http://portal.unesco.org/geography/en/ev.php-URL_ID=9886&URL_DO=DO_TOPIC&URL_SECTION=201.html

In Monrovia, Liberia, in 2004, following an outbreak of violence which escalated from a property dispute into fighting and the burning of churches and mosques throughout the city, the Liberia Transition Initiative developed the Community Youth Peace Education Programme (CYPEP), designed to address issues of peace building and conflict resolution amongst urban youth. CYPEP empowered and trained youths to be peer educators. They in turn led other youths in a six-week training programme aimed at transforming their attitudes and enabling them to become peace agents in their communities. An evaluation of this project showed that after one year of operation, CYPEP had been implemented in over 96 communities throughout Liberia, eight local NGOs had been contracted to implement the programme at the community level, 250 local facilitators had received training and over 4,800 urban youths had graduated from the programme. Surveys, focus group discussions and individual interviews revealed that 63 per cent of the participants claimed to have obtained a strong sense of personal satisfaction from their behaviour, that they had a new sense of identity and respect for others, and that they now understood how to resolve conflict and provide a unifying and positive force within their own communities (Yeager Sallah, 2006).

Dhungana (2010) reports on the Peace Education initiative in Nepal which followed the 1996–2006 conflict between the government and Maoist forces. This was a joint enterprise involving the Nepalese government, UNICEF, UNESCO, Save the Children and other organisations. As well as supporting the inclusion of peace education in the national curricula, the programme targeted particular communities and groups. Peace education modules were developed for use in the more than 10,000 government- and NGO-supported child clubs. Teachers received training in how to help reduce community tensions, act as mediators, initiate dialogues between conflicting communities and help in community reintegration. Peace education was also provided for the younger, more recently recruited combatants so that they in turn could train other former combatants in moving towards community reconciliation and reintegration. Special programmes were also developed for youth groups, dealing with peace-building skills, democratic leadership, and civic rights and responsibilities. The summative evaluation of this intervention revealed that it had increased understanding on peace, human rights, tolerance, the causes of conflict, and the processes of mediation and negotiation, not only amongst the immediate learners but amongst their families and communities as well.

The Inter-Agency Network for Education in Emergencies (INEE) has introduced a life skills-based Peace Education Programme (PEP).³⁵ Following the ground-breaking United Nations/UNICEF report by Graça Machel, which drew global attention to the devastating impact of armed conflict on children (United Nations/UNICEF, 1996), UNHCR and its field partners initially piloted this programme in the Kenyan refugee camps of Kakum and Dadaab. Developed and endorsed by UNESCO, UNHCR, UNICEF and INEE, PEP was subsequently introduced into other UNHCR-supported

³⁵ www.ineesite.org/post/peace_education_programme

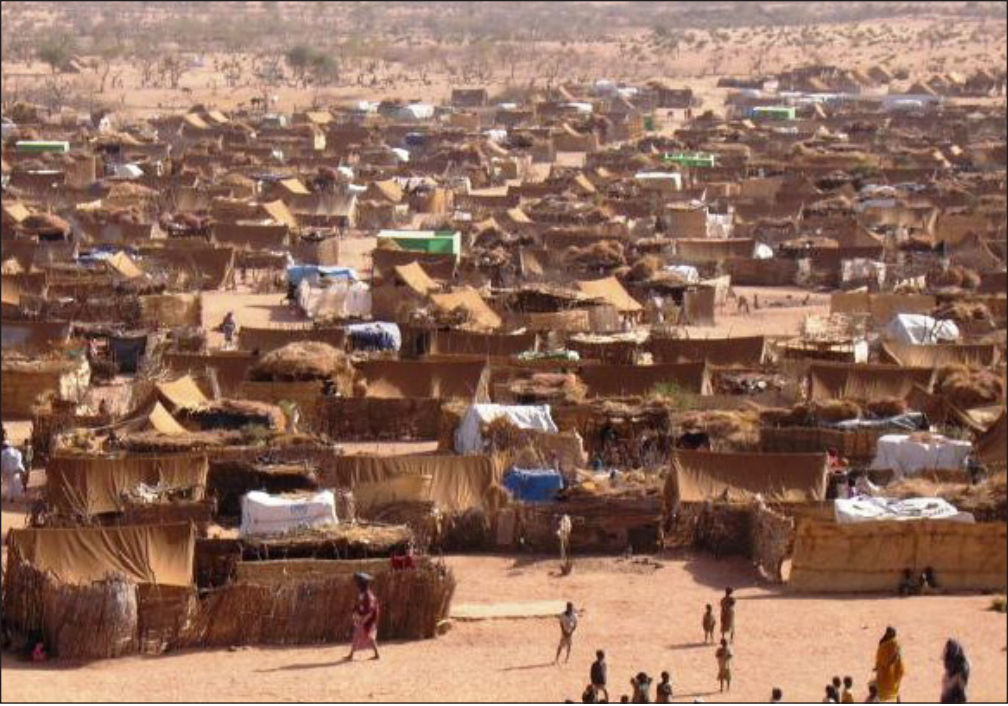


Photo: © Mark Knobli, InformAfrica.com

Darfuri camp in Chad. Uprooted by conflict and persecution, refugees and internally displaced persons (IDPs) face some of the toughest and most insecure living conditions in the world.



Photo: © Africa Educational Trust

Africa Educational Trust has been working to ensure that refugees and IDPs in camps in Somaliland and Central Southern Somalia can still receive education and training.

programmes for refugees and other conflict-affected populations elsewhere in Africa, as well as in Sri Lanka, Kosovo and Pakistan, where local and refugee teachers have been trained and deployed as peace education leaders and trainers. The programme is designed to encourage people to think constructively about peace issues, develop positive attitudes towards living with each other, and resolve community problems by peaceful means. It enables the learners to actually apply these skills, discover the benefits for themselves, and then take ownership of the skills and behaviours. The substantial resources for the facilitators and trainers in PEP include background notes; facilitators', trainers' and community workshop organisers' guides and manuals; teacher activity books; charts; a collection of stories and poems; selected peace education materials; and an evaluation sheet (Verdiani, 2005).

Micro and small-to-medium enterprise development

The economic significance of smaller business enterprises in the developed and developing world is easily overlooked. Many of the world's economies are based on micro-enterprises employing fewer than 10 persons, and small or medium enterprises (SMEs) with 10–249 employees. In the European Union (EU), SMEs represent more than 99 per cent of all companies (European Commission, 2005). In Pakistan, they constitute nearly 90 per cent of all enterprises, employ more than 80 per cent of the non-agricultural workforce and account for 40 per cent of the gross domestic product (Small and Medium Enterprises Development Authority, n.d.).

SMEs provide jobs in urban and rural areas alike. They can have a significant effect on income distribution, tax revenue, efficient utilisation of resources, stability of family income, and value-adding in agriculture-led economies, retail and craft-work. Many are family-run businesses, and OECD (2000b) recorded that in many countries, women own between one quarter and one third of all SMEs. However, in some other countries the representation of women in this sector is still relatively low, due to low levels of education, and/or cultural or religious constraints.

With limited finances, resources and access to current knowledge and information, SMEs in developing countries have little opportunity to update their ideas and methods. However, they can be helped by a combination of distance and online methods and “clustering” — the creation of informal networks for accessing, retrieving, applying and sharing knowledge and skills with training organisations, suppliers and other providers. India has more than 8 million SMEs, manufacturing auto and electronic components, garments, etc. Microsoft's Project Vikas, in partnership with the National Manufacturing Competitiveness Council (NMCC) and the Government of India, is helping these SMEs to succeed in a competitive environment through the use of ICT:

- At the enterprise level, by increasing operational efficiency through better productivity, reduced costs, improved quality, access to better skills, improved market access, and enhanced sales and profits.

- At the cluster level, by achieving a commonly agreed vision for development of the cluster, increased awareness, and best practices.
- At the ecosystem level, by positioning linkages with state agencies, financial institutions, academic institutions, and research and development agencies.

An E-Readiness Centre provides technical training, consulting services, business incubation services and knowledge sharing platforms to the SMEs, while the Tirupur Exporters Association portal, linked to the national portal of NMCC, helps them reach beyond geographical boundaries and establish a footprint in the global ecosystem (Sohdi, 2008).

NFE programmes can also be provided for youth in support of micro-entrepreneurship. According to the World Bank (2007), 47 per cent of the world's young people are without work, and this factor is consistently cited as a motive for youths to join rebel movements and urban gangs. Even those who are employed are often stuck in low-productivity, poorly paid jobs. In Africa, the challenge is to find productive employment for the 7–10 million youngsters who enter the labour market every year. Al-Samarrai and Bennell (2003) found that in southern Africa, only 50 per cent of youngsters exiting junior secondary school had jobs, and 30 per cent had to fall back on self-employment in vending or building. Most regarded this as “employment of the last resort,” earned even less than those who were in jobs, and had to learn as they went. However, enterprise development is seen as the only employment alternative for many of the world's low-income youths, so this is clearly a priority area for distance and online NFE.

The training most in demand by the self-employed or those running micro-enterprises concerns:

- Numeracy, literacy and communication.
- Problem solving.
- Understanding one's rights.
- Management and self-management.
- Bargaining.
- Training in the trade or occupation on which the enterprise is, or will be, based.

This training can be certificated or non-certificated, offered through a variety of means, and provided by:

- Governments.
- Donors.
- NGOs.
- Community, local philanthropic and religious organisations.

- Business federations, such as chambers of commerce and industry.
- For-profit providers.

SMEs, micro-enterprises, the self-employed and those seeking employment are unlikely to have the time, opportunity or funds for, or access to, full-time study, so open and flexible methods are the only alternative. ICT can provide asynchronous training in skills centres for those opting for part-time or out-of-work-hours study. However, as UNCTAD (2002) observes, with the dramatic growth in cellular subscribers in the developing countries, it can be assumed that learners will have mobile telephones and be using the pre-paid mode — not requiring strong credit records and controlling the costs. mLearning can be used to deliver “nuggets” of information and training on-demand, even for those on the move. But soundly based, innovative approaches are needed to overcome problems for learners: limited access and infrastructure; low motivation; lack of documentation; low awareness of what is available from informal and formal sources; and lack of knowledge regarding how to select elements that best suit their needs. Even dealing with these challenges is not enough. People with the capacity to apply their new knowledge and skills also need access to micro-credit or small community loans, and links to competitive markets and value chains. Making Cents International (2008) suggests that entrepreneurial capacity-building also requires ongoing community support, mentoring and follow-up so that people don’t give up in the face of adversity or failure.

An incubation and training-the-trainers approach can also be adopted. The 12 one-day training modules of *infoDev*’s Business Incubation Training Curriculum³⁶ teach would-be incubation training managers in developing countries how to foster the start-up and growth of competitive enterprises. One of the participants in this programme in Botswana found that more and more former students were approaching him for advice on their business plans and grant applications. So he decided to rent out space in his own incubation facility for two start-up companies to work in ICT fields linked to local needs in agricultural and natural resource diversification. This initiative is self-funded, but other sources will be accessed to procure ICT infrastructure and equipment, and the Botswana Ministry of Education and Skills Development has also commissioned this centre to establish ICT clubs in local high schools to set students on the path to entrepreneurship (*infoDev*, 2011a). Another new ICT business incubator in Dar es Salaam, Tanzania, is also helping young entrepreneurs and early-stage enterprises with business advice, mentoring services, networking opportunities, and access to financing, markets and shared facilities. In its first year of operation, it achieved a client base of nine companies, employing 72 people; 38 university graduates attended its pre-incubation program, which led to six start-up companies, and 30 university students received training in cutting-edge mobile technology applications. It will also implement a virtual incubation programme in rural areas of Tanzania, in partnership with the International Labor Organisation (*infoDev*, 2011b).

³⁶ www.infodev.net/12

Information kiosks and community-based telecentres

Community use of ICT in rural, low-income or marginalised communities is enabled by a range of initiatives, from simple information kiosks run by villagers to multipurpose and multimedia community telecentres. Large or small, high-tech or low-tech, these are helping to develop a new ICT-literate generation and enabling people to gain information, learn, communicate with others, and use ICTs to improve their livelihoods.

Village kiosk sites, such as those operating in rural India through the Drishtee Foundation³⁷ and as micro-franchises in Uganda, Bangladesh and other parts of Africa and Asia through Grameen Telecom's Village Phone Programme,³⁸ are modest enterprises. Local villagers receive small loans, become kiosk owners, operate the services on a commercial basis, repay their loans and thus become self-employed. The Education Development Center (EDC, 2003) describes some of the public benefits resulting from the information kiosks in India:

- Previously unimaginable communication and information exchange via intranets between villages and district centres.
- Franchise opportunities for thousands of villagers, whose earnings range from reasonable to high.
- Computer literacy in children, youths and adults.
- Better and prompter services by government and other agencies.
- New online services such as applications for certificates, grievance redressal, research services for farmers, and a virtual bidding marketplace.
- Reduced cost — by a factor of ten — to individuals contacting government agencies, in many cases enabling them to access these services for the very first time.
- Better organised and empowered self-help groups.
- New models of e-governance.

IDRC (2006) estimated that there were more than 60,000 telecentres around the globe, not including school computer labs, libraries, cybercafés and other telecentre-like public access and learning sites; telecentre.org (2012) now reckons that there are 86,912 telecentres in 52 countries. Fuchs (2011) observes that what began as a response to economic exclusion in peripheral regions of the post-industrial world has become a mechanism by which development activists bring digital tools to help marginal groups and regions across the world.

³⁷ www.drishteefoundation.org

³⁸ www.grameenfoundation.org/what-we-do/empowering-poor



Photo: © Intersat Africa, Ltd. and Voices of Africa

The Voice of Diani (VOD) works with Kenyan communities in identifying and removing the root causes of their problems: HIV/AIDS, persistent poverty, a high rate of drug abuse among the youth, early pregnancies, high dropout rates, child abuse, human rights violations and ethnic mistrust. It provides information, basic computer training and low-cost browsing through the solar-powered, satellite-connected Rural Internet Kiosk, which uses an open source operating system and has one computer serving three to five monitors.



Photo: © IICD (CC BY 2.0)

Mark Farahani saw a business opportunity in setting up a telecentre in Kilosa, Tanzania. Opening with just one offline computer, the centre now provides ICT, secretarial, and youth and women's advisory services, and marketing skills and small loans for farmers.

Telecentres operate under a variety of names: multipurpose community telecentres, public Internet access centres, village knowledge centres, infocentres, community technology centres, and so on. They also function according to various business or organisational models: some are government- or NGO-supported, some are sponsored by international development agencies, some are private and run for purely commercial purposes, and some are linked to educational institutions. They provide an array of functions and serve a range of community clientele. Their overall concern is using ICT for social and economic development, but in some countries, they also play a role in community mediation and the quest to decrease levels of crime and violence (Bailey & Ngwenyama, 2010).

Some telecentres, like those run by the Sarvodaya Shramadana Movement³⁹ in Sri Lanka, provide entrepreneur skills development, and help villagers use ICT for marketing and selling their products. In the post-conflict zones in Sri Lanka, telecentres have played a major role in re-establishing local communities, helping children in resettlement villages catch up on their schooling, providing adults and youth with basic education, and helping to restore libraries, resource centres, as well as community, agricultural, cultural and intergenerational services.

Some telecentres help with health and hygiene education. Others familiarise communities with the concepts and practices of e-governance. In Uganda, a solar-powered telecentre in Bwindi Impenetrable National Park⁴⁰ provides villagers — half of whom are women — with training in basic computer skills which is certificated by Makerere University, and develops skills for social enterprise and employment within and beyond the national park. Using multimedia technology, it brings health and environmental awareness to this isolated and impoverished area, and enables the local community to market their batik and crafts over high-speed wireless Internet. Its computers are also used to input field data on the health of the endangered mountain gorilla population, recorded by the Bwindi Park Rangers using handheld computers. This facilitates faster and better diagnosis and treatment for a species which is so critical to the fragile environmental and economic ecosystem. The telecentre's services are also available on a fee-for-service basis for ecotourists, tour operators, institutions, and health and wildlife agencies, which generates funding to move the telecentre towards self-sustainability.

Ivins (2011) describes how both ICT and OER are being used in 200 community centres, also known as “micro-learning centres,” in Nepal. These centres serve as information hubs in communities where libraries are non-existent and schools are often dysfunctional or bankrupt. Each centre has a manager, ICT trainer, literacy facilitator and community mobiliser, and provides newspapers, magazines, books and ICTs such as digital cameras, radios, computers, printers, faxes and telephones. The managers, known by some villagers as “knowledge workers” or “village ambassadors,”

³⁹ www.sarvodaya.org

⁴⁰ The telecentre was a finalist in the 2010 Stockholm Challenge: www.stockholmchallenge.org/project/data/conservation-through-public-health-bwindi-impenetrable-national-park-telecentre

seek out OER appropriate to the learners' needs and customise the content to match their experiences, abilities and interests; managers thereby build momentum for the so-called "micro-learning movement," in contrast to one-size-fits-all "macro-education." The OER are freely obtained through an open portal, but the learners pay a nominal fee for the localisation, customisation and mentoring services provided by indigenous experts and for the computer and Internet use. In this way, a small economy emerges through the services generated in the "micro-learning centres."

In an increasingly connected world, it is important that telecentres are not only properly equipped but are also managed and staffed to exploit the possibilities of networking. Subramanian and Arunachalam (2009) describe how M. S. Swaminathan "village knowledge centres" in India (described as the spokes in the system) link to "village resources centres" (which are the hubs); these in turn link to external information sources, experts and institutions. Staff in the hubs manage the databases of the local intranet. The village centres are manned by specially trained volunteers, again known as "knowledge workers," many of whom are women. One of their tasks is to track down information requested by the villagers. Many of the villagers are at best semi-literate and they are certainly incapable of understanding scientific papers on such issues as women's health, growing local crops and protecting them from diseases, or fishing; most of the Web is in a foreign language to them and lacks locale-specific information. So the hub staff track the requested information, translate it into the local languages and develop multimedia to make it understandable to the villagers. The knowledge workers then help the villagers work through the answers and, where these are of general interest, also place these on village notice boards or in community newspapers, or broadcast them over public address systems. Local knowledge is also shared between the village knowledge centres, or collated and digitised by the staff at the hubs and distributed to the other centres by cable, broad spectrum and duplex VHF radio, Wi-Fi and satellite. The villagers can also videoconference with experts and institutions, a direct, conversational approach that is much easier than making formal written requests for information.

Not all telecentre ventures have proved to be sustainable. They need to be based on sound business plans, they need to have local champions, they need community support, and with the increased penetration of mobile technologies, they need to continuously evolve to remain relevant to the communities they serve (Latchem & Walker, 2001; Roman & Colle, 2002). They also need to be informed about best practices and linked to other telecentres across the globe. In 2005, at the World Summit on the Information Society in Tunis, a new multi-stakeholder initiative was announced — telecentre.org.⁴¹ Supported by Canada's IDRC, Microsoft Community Affairs, the Swiss Agency for International Development, and the Philippines Commission for Information and Communications Technologies, telecentre.org provides grants and technical assistance to telecentre networks and organisations across the globe. It supports:

⁴¹ www.telecentre.org

- Network building to make telecentres more effective, sustainable, and valuable to their communities.
- The development of high-value content and services that communities need and that telecentres can use to generate income for sustainability.
- Sharing of ideas, learning, best practices and innovation.
- Formally accredited telecentre manager training through the Telecentre Academy.
- Research into the impact of telecentres on social and economic development.



Photo: Commonwealth of Learning (CC BY-SA)

COL's regional office, the Commonwealth Educational Media Centre for Asia (CEMCA), is promoting QA in multimedia learning materials.

QA

Part Four

Quality assurance in open and distance education-based non-formal education

Researching this book, we found that relatively little research into NFE is being reported in the current literature on open and distance education (ODE). This confirms what Dodds (1996, p. 56) concluded in his earlier global review of the use of distance education in NFE:

Non-formal education-at-a-distance is very poorly documented. There is therefore very limited opportunity . . . for practitioners in one programme to learn from the experience of other relevant and related programmes. [There] is very little serious research and evaluation carried out in such programmes to determine what works well where, when and with whom. There is little analysis of costs or effects. Every new project starts anew to develop its own approaches, materials and methodologies as if no other wheels already exist . . . The result is that, with some notable, and usually temporary, exceptions their overall impact on social, economic and educational development is smallscale. Hence starts, or continues, a vicious circle of low status, poor resources, low staff morale, low quality and poor results.

Robinson (1999) has also commented on the difficulty of obtaining reliable and complete data to substantiate the claim that NFE fosters development and represents value for money. She asked:

Can the research literature provide clarification and analysis of the use of ODE for non-formal education? So far, the light it can throw is limited because the research base is small. Though many ODE projects for non-formal education have taken place, the number reported and analysed in the ODE literature is relatively few . . . [and] the information available tends to be scattered across many different sources, hard to find, poorly documented and sometimes in the form of uncritical reports of hearsay evidence. Since well-informed description is the first step towards analysis, this makes it difficult to draw sound generalisations about the use of ODE for non-formal education and to build theoretical models. (p. 2)

Sinclair (2002) observes that sustainability is an important consideration in NFE, so it is also important to prove that programmes can endure and serve similar needs in other contexts.

Unfortunately, when NFE programmes are evaluated and the findings are made public, it sometimes transpires that they do not achieve the outputs, outcomes and impacts intended. The audits of two major NFE initiatives by high-profile international agencies, which shall remain anonymous, illustrate that this is largely attributable to poor planning, management and monitoring of quality. To their credit, both agencies published the quality audit reports on the Web.

One quality audit concerned a multimillion-dollar, multi-partner international initiative aimed at increasing educational opportunities and improving skills training for out-of-school children and youths in developing countries. The auditors checked all the data provided by the various partners, conducted site visits to verify the work being carried out, and interviewed the local officials, managers, teachers, students and other stakeholders. They concluded that the programme to date had achieved variable success because neither the mission, nor the targets expected of the partners, nor the means of monitoring quality had been clearly defined. Some of the data were unreliable or uninformative and some were inconsistent with the key performance indicators. This audit was commendably transparent in highlighting these shortcomings, and its findings led to recommendations that could improve the quality of the future processes and outcomes.

The other case was a multi-nation programme providing NFE in emergencies and post-crisis transition. Again, the auditors found that many aspects of the programme had failed to fulfil expectations. They attributed this to the fact that the original programme proposal and planning had managed to be both ambitious in scope and imprecise in defining the values, goals and measures of success. The visionary rhetoric and lack of precision in regard to the outcomes and strategies required had affected the coherence and effectiveness of the programme. Communications between the donor and its partners were not clear, and by the time the key concepts and expectations had filtered down to the school and community levels, they were neither well understood nor consistent in the manner and quality of the implementation. Where monitoring had occurred, the data were of poor quality, and while provision had been made for tracking the allocation and expenditure of funds according to the donor and country protocols, the system did not permit easy analysis of expenditure by goal or activity. The auditors concluded that there was need for far better management, communications and disbursement measures by the donor, and greater ownership and engagement in the assurance of quality amongst the partners.

These observations serve to reinforce the point that QA in NFE is essential for:

- Policy makers, to help them in their envisioning, objective setting, and prioritising.
- Sponsors, governments and other agencies who need evidence of the responsible and effective use of the funds and support they provide.
- Providers, who require evidence of the impact and benefits of the programmes they plan and deliver.

- Learners, who require assurance that the standards of provision and standards against which their knowledge and/or ability is assessed are consistent and of high quality.
- Other stakeholders who are keen for this sector to receive greater recognition and support.

Admittedly, it is not always easy to manage QA in NFE. The formal sectors of education have the power to confer credentials, require audits and control QA. NFE providers are mostly non-governmental agencies, albeit sometimes funded by governments, and generally tend to shy away from bureaucracy. QA requires both fiscal and human resources and again, while the formal sector has access to these, NFE providers may find it difficult to marshal the means for quality practice. In formal education, the lead times for programme and course planning and implementation allow for QA. NFE time frames are typically much shorter, making it difficult to build QA into the planning and implementation. Despite all of these difficulties, it is important that governments, donors and NFE providers develop and apply rigorous and transparent QA systems.

However, QA should not be over-burdensome or over-costly, so it is important to give careful thought to the *total quality costs*. These comprise:

- **Prevention costs:** These are the costs involved in avoiding defects at the outset — consulting with stakeholders regarding needs, creating the QA policies and procedures, providing training in QA, and implementing the QA system.
- **Appraisal costs:** These are the costs involved in formatively and summatively evaluating systems, products and services to ensure that these conform to the required standards and to prevent any failure costs.
- **Failure costs:** These can be internal or external. The *internal failure costs* arise before programmes go public — when it is found during their development that they need to be reworked, replaced or at worst, abandoned. The later these failures are detected, the more they cost to put right. The *external failure costs* arise when programmes are being delivered and there is unexpected and unbudgeted need to deal with learners' problems and complaints, install additional, unanticipated support, scrap programmes and develop replacements, and counter bad publicity or loss of morale. These costs are typically much higher than internal failure costs.
- **Opportunity costs:** These are the benefits that could have been gained from alternative actions had the failure costs not been incurred.

Highly developed QA systems ensure that high-quality products and services are quickly and efficiently delivered, and that they result in greater user satisfaction with and stakeholder confidence in the systems, programmes and services. On the other hand, the prevention and appraisal costs of achieving zero-defect systems can be very high. So, as Nguyen and Pirozzi (2006) suggest, it is necessary to calculate what form

of QA will provide the best return on investment. To overcome possible resistance to adopting and financing certain QA measures, Kaner (1996) suggests consulting with those directly involved. Their complaints about the time, costs and inconvenience of any failures in the systems, programmes and services can then be used as evidence to show that failures do have costs attached to them, and that there are cost benefits in QA.

Implementing a QA system in open and distance education-based NFE

In this toolkit, we advocate the use of an outputs-, outcomes- and impacts-based QA system rather than an inputs-based system. Traditionally, QA has been concerned with the inputs — the planning, provision and resources. But the quality of outcomes is beginning to attract closer attention at the policy and funding levels. This is because outputs, outcomes and impacts statements give the stakeholders a far better understanding of what is intended to be achieved and what has been achieved, inform the programme and course design, and increase the transparency and accountability in the systems, programmes and services. Above all, the providers and participants involved with NFE desire quality results and value for money.

Programmes can have short-term and longer-term outcomes. These can be intentional or unintentional, and positive or negative. In this toolkit, drawing upon OECD (2002a) as well as OECD-DAC and World Bank (2007), we make the following distinctions:

- Outputs are the immediate effects of the programmes on individuals and groups.
- Outcomes are the short- to medium-term effects of the outputs: the observable behavioural, institutional and societal changes that take place over a period of time.
- Impacts are the longer-term, significant, structural, sustained and positive improvements in the lives and circumstances of those who were engaged in the programmes.

As we have emphasised earlier in this toolkit, QA is not something to be thought about after the event. The QA system needs to be established right at the initial planning stage in order to support the development of the programme and provide a basis for assessing whether, and to what extent, the outputs, outcomes and impacts expected by the stakeholders are being achieved (by means of formative evaluation) or have been realised (by means of summative evaluation). After this assessment process, it is then possible to judge whether the inputs were appropriate, sufficient or effective, and to plan for further quality improvement. In this chapter we suggest the steps needed to do this. You will recognize that this closely follows the process entailed in strategic planning. Both use the “Plan, Do, Check and Act” cycle advocated by William Edwards Deming (1986), who is credited with founding the total quality management approach.

So let us go through the QA process step by step. At each stage, we illustrate how this was done in the case of the Commonwealth of Learning's Lifelong Learning for Farmers (L3F) initiative, drawing on the generic framework for this learning-for-development project (COL, n.d.) and various evaluation reports.

Needs analysis

The first step is to identify or confirm the needs of learners, communities and the other key stakeholders. We need to determine the current state of skills, knowledge, attitudes, abilities and circumstances of the learners and communities, and the skills, knowledge, attitudes and abilities needed to achieve the desired outcomes. This can be done by means of:

- Direct observation.
- Consulting with persons in key positions and/or with specific knowledge in the field.
- Focus groups and interviews.
- Research studies and questionnaires.
- Reference to the relevant literature.

Careful needs analysis is essential to ensure that the programme is not based on false assumptions or ready-made, off-the-shelf solutions. Balasubramanian (2010) urges that we should always verify the data by cross-checking and by asking:

- Who created the information?
- What is the background of the providers of this information?
- Where and when was it created?
- How long will the information be relevant, valid and accurate?
- Who validated the information?
- Who else might be interested or has similar knowledge?
- Where was it applied or proved to be useful?
- What other sources of information are closely related?
- How can some of the concepts be tested and validated?

In the case of the L3F initiative, by going through this process, COL (n.d.) established the need for:

- Developing capacity in farmers, landless labourers, and rural and marginalised communities to develop value-added farming, engage in more sustainable use of natural resources, face globalisation, and ensure food and livelihood security.
- Global and local partnerships between research institutions, extension agencies and farming communities to match the scale of need.

- The banking sector in the developing world to find ways of strengthening rural credit, which was being hampered by high transaction costs and large non-performing assets.
- Self-help groups and micro-finance to offer advantages of scale in terms of transaction costs and lowering non-performing asset rates.

When in 2004 L3F was first being planned for four villages in Tamil Nadu in southern India, COL partnered with an NGO which involved 239 women's self-help groups. COL and this NGO conducted a needs analysis with these groups and found that these women had a keen interest in micro-enterprises involving goat and sheep farming. However, the information that they required (from agricultural and agribusiness research and development) failed to travel "the last mile" to the communities where it was most needed. It was envisaged that providing open learning and empowering vulnerable rural women and their families would enable them to:

- Gain knowledge.
- Create their own self-directed learning process.
- Organise themselves to solve problems in product marketing and food security.
- Improve their living conditions.
- Increase their freedoms and independence from government support.

COL and the NGO also identified the mobile phone as the optimum learning tool because it would enable these women to learn and talk to each other while herding and tending their flocks.

Vision and/or mission statement

The second step is to develop a vision and/or mission statement. The vision statement concerns what the organisation or programme wants to be and the mission statement describes the organisation's or programme's reason for existence. Some organisations use vision and mission statements interchangeably. Some express them in overblown rhetoric that can mean anything, or nothing — for example, "To be a cutting-edge, best practice and innovative supplier of non-formal education delivering stellar programmes in a timely and appropriate manner." This is to be avoided at all costs, since the outcomes need to be realistic, actionable, observable and measurable.

The vision/mission statement must be so written as make the intentions, form and direction of the organisation or programme quite clear to all the stakeholders. In the case of L3F, the pilot initiatives were intended to provide a reference point for larger programmes and policies, so the vision was:

- To evolve a self-replicating and self-sustaining programme in lifelong learning for farmers, using modern ICTs to build capacity in developing value-added farming, ensuring food and livelihood security, and encouraging the more sustainable use of natural resources.

Goals/objectives

The next step is to define the goals or objectives. These state the purpose, scale/nature and activities of the programme that is going to be provided, in accord with the needs of the groups to be served. In the case of L3F, the goals were:

- To facilitate a process and system of lifelong learning in rural communities, leading to knowledge empowerment, particularly amongst women and other poor sections of the community.
- To facilitate the translation of such knowledge empowerment into livelihood security.
- To utilise modern ICTs for facilitating such a process.

Values, philosophy or premises

The next step is to set out the values, philosophy or premises upon which the project or programme will be based. In the case of L3F, these were expressed thus:

- Extension is a facilitation process through which a community is empowered to manage the agricultural knowledge system and agricultural information systems.
- Extension takes place in the context of already established social capital such as cooperatives, self-help groups, associations, etc. which form a strong, active utiliser constituency. Cognitive social capital is a precondition for lifelong learning.
- The community is not a mere consumer of information but rather a partner in knowledge management.
- Facilitating self-directed learning amongst the active utiliser constituency is an important dimension of L3F.
- L3F and learning for livelihood are the processes of a community understanding and internalizing value premise analysis, value chain analysis, value system analysis, and the value coalition process in the primary sector.
- In L3F, an extension agent (or agency) is one who facilitates community-level knowledge management and transforms social capital into social learning capital.
- There will be paradigm shifts in pedagogy and management.

Strategies

The next step is to outline the strategies to be employed. These strategies will be based upon certain hypotheses (in the case of L3F, these are shown above, under “Needs analysis”). The subsequent QA can then test these hypotheses and judge whether, and to what extent, the strategies were appropriate and the desired outcomes had been realised. In the case of L3F, the strategies were to:

- Encourage and support non-exploitative, mutually reinforcing contractual relationships between rural producers and the formal public and private sectors, through schemes such as “buy-back” arrangements and contract farming.
- Promote rural entrepreneurship as well as formal public- and private-sector support for the rural community in the future.
- Involve the banks and markets as stakeholders.
- Blend rural credit with appropriate capacity-building, so that the performance of rural credit would be much better vis-à-vis productivity, returns and non-performing assets levels.
- Use capacity-building as a means of enlarging the market for bank credit amongst small and marginal farmers, and amongst other marginalised sections of the rural poor, particularly women.
- Use modern ICTs through structures such as rural Internet kiosks, rural telecentres, mobile phones, community radio, etc. to facilitate the capacity-building processes in ways that are financially viable, economically feasible and socially acceptable.

Stakeholders and partners

Having progressed to this point, it is useful to consider the needs, expectations and capacities of the multiple stakeholders and partners in the programme. In the case of L3F in Tamil Nadu, the initiative was undertaken in partnership with a NGO called VIDİYAL. Its aims are to strengthen rural economies by improving access to markets through rural micro-finance, infrastructure development and maintenance, and it had a long tradition of working with a women’s federation of self-help groups called VIDIVELLI. VIDİYAL showed a keen interest in goat and sheep enterprises, identifying this as a viable venture for the region. The plan was for the women to be trained in starting up small goat- and sheep-rearing enterprises and then helped to develop business and credit plans so that each of them could buy nine female goats, one buck, and a mobile phone through which they could receive ongoing training by audio messages and voicemail. This arrangement required deals to be struck with the local banks to support the project by granting loans to these women, and with a mobile service provider to supply the necessary phones plus three to five free calls a day, which would enable these farmers to receive and send messages. In both cases, the deals were successfully negotiated on the basis that once the farmers had been trained, the banks and the phone company would receive additional revenue. Another key partner was the Tamil Nadu Veterinary and Animal Sciences University, which was to provide the content and indigenous knowledge contextualised to suit the local culture and dialects (Balasubramanian et al., 2010)

Outcomes

The next step is to carefully and explicitly write down the intended outcomes of the programme. These should:

- Reflect the expectations and requirements of the learners and other stakeholders as well as the overarching vision and values.
- Provide the means of assessing the benefits, impacts and changes in the learners and in their subsequent behaviours and activities as a consequence of the programmes.
- Be stated as short-term outputs (the knowledge and skills acquired), intermediate-term outcomes (the changes in behaviour) and long-term impacts (the changes in values, circumstances and status).
- Inform the decision-making about the policies, procedures, resources and systems critical to achieving these outcomes, and how these must interact and work with each other. (This is important because failure in one element can affect the others, and ultimately the outcomes. For example, failure to achieve the required knowledge and skills in the learners may be due to inappropriate teaching and learning methods and materials, or to inadequate funding, insufficient time allowance for training the trainers, poor marketing, failure to recruit learners with the necessary motivation, commitment and experience, and so on).

These outputs, outcomes and impacts can be expressed as:

- Targets, such as the number and percentage of participants who are expected to achieve particular outcomes.
- Key performance indicators (KPIs).
- Critical success factors (CSFs).

KPIs are the financial and non-financial measures that will help the programme planners, managers and other stakeholders assess progress towards the stated visions and missions, and judge the programmes' outputs, outcomes and impacts. They also enable teams to work together to a common set of measurable goals. They may take the form of:

- Quantitative indicators (fact-based measurements such as learners' enrolment and retention levels).
- Qualitative indicators (subjective data such as learners' satisfaction levels).
- Directional indicators (measures gauging whether the trends are improving or not — for example, in communities applying the new learning).
- Actionable indicators (designed to provide guidance on the design of reforms, the monitoring of impacts, and the organisation's ability to effect change).
- Financial indicators (cost efficiencies, cost benefits, opportunity costs, etc.).

CSFs may be measured in several ways, for example:

- Increased external funding, revenue or profit margins.
- Attracting new partnerships, new markets or new students.
- Improvement in what the staff know and can do.
- Capacity to appoint and retain the very best staff.
- Capacity to survive or advance in the face of changes and challenges.

KPIs and CSFs can be assessed descriptively and/or numerically. Table 1 below shows how a simple analytic rubric can be developed for the formative or summative evaluation of the outputs, outcomes and impacts. On the evidence available, each KPI or CSF can be assessed as “exemplary,” “good,” “developing,” “unsatisfactory” or “unmet.” Statements justifying these decisions can then be entered in the appropriate box and a numeric value can be entered in the final column. As the rubric is filled in, it will quickly become apparent where the KPIs or CSFs are, or are not, being met.

Examples of the kinds of KPIs that can be used in assessing outputs, outcomes and impacts in regard to the learners, learning provisions and community are given in Tables 5, 6 and 7 in Part Five of our toolkit.

Table 1: An analytic rubric for judging the achievement of key performance indicators or critical success factors

KPIs/ CSFs	Exemplary/ excellent (4 points)	Good (3 points)	Developing (2 points)	Unsatisfactory (1 point)	Unmet (0 point)	Total score
KPI/CSF #1	Statement on why the outcome is considered exemplary.	Statement on what is good about the outcome.	Statement on the progress being made towards achieving the outcome.	Statement on why the outcome is considered unsatisfactory.	Statement on how and why the outcome is not being met.	0 1 2 3 4
KPI/CSF #2	Statement on why the outcome is considered exemplary.	Statement on what is good about the outcome.	Statement on the progress being made towards achieving the outcome.	Statement on why the outcome is considered unsatisfactory.	Statement on how and why the outcome is not being met.	0 1 2 3 4
KPI/CSF #3	Statement on why the outcome is considered exemplary.	Statement on what is good about the outcome.	Statement on the progress being made towards achieving the outcome.	Statement on why the outcome is considered unsatisfactory.	Statement on how and why the outcome is not being met.	0 1 2 3 4

A similar approach can be used for judging the quality of the QA system itself, as shown in Table 2. Here the intention is to evidence the quality of the policies and

procedures, monitoring systems, performance standards, and response to problems and shortcomings, and in the light of these findings, recommend the actions needed to improve the QA system.

Table 2: An analytic rubric for judging the quality of a QA system

Stated outcomes	Policies and procedures	Monitoring systems	Performance standards	Response to problems and shortcomings	Action(s) needed	Total score
Outcome #1	Statement on the quality of the policies and procedures.	Statement on the quality of the monitoring procedures.	Statement on the quality of the performance standards.	Statement on the steps taken to rectify the problems and shortcomings.	Statement on the action(s) needed.	0 1 2 3 4
Outcome #2	Statement on the quality of the policies and procedures.	Statement on the quality of the monitoring procedures.	Statement on the quality of the performance standards.	Statement on the steps taken to rectify the problems and shortcomings.	Statement on the action(s) needed.	0 1 2 3 4
Outcome #3	Statement on the quality of the policies and procedures.	Statement on the quality of the monitoring procedures.	Statement on the quality of the performance standards.	Statement on the steps taken to rectify the problems and shortcomings.	Statement on the action(s) needed.	0 1 2 3 4

Inputs

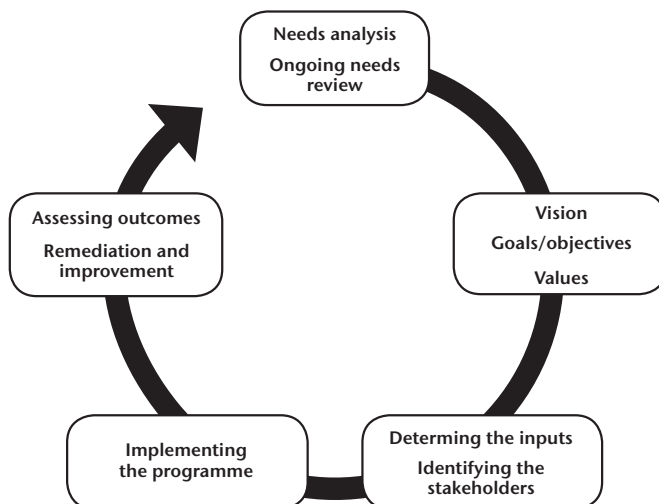
The inputs are easy to identify, and many are common to all organisations and programmes. These can be set out in various ways, but here we have broadly followed Ferreira (2010) by suggesting that they concern:

- Policy and planning.
- The learners.
- Management and administration.
- Staffing.
- Technology and infrastructure.
- Funding and budgeting.
- Collaborative relationships.
- Quality assurance.
- Follow-through to the learning.

Some QA systems actually start with and primarily deal with these inputs. However, the vital evidence of quality and value in NFE lies in the learning outputs and outcomes, the impacts on the communities and/or national economies, and the returns on investment, which is why this toolkit advocates the adoption of an outputs-, outcomes- and impacts-based approach to QA. By assessing and measuring

these results, it is possible to gauge the quality or lack of quality in the inputs that led to these outcomes, and the ways in which the quality of the inputs can be improved in future operations. Everything can always be done better, so QA needs to be repeatedly implemented in spirals of increasing knowledge and improved practice that work towards the ultimate goal.

Figure 2: The quality cycle



Gathering the data

During or after the programme’s implementation (depending upon whether the QA is formative or summative), the first step is to plan for collecting the data. The critical questions to ask here are given in Table 3. In asking these questions, it is important to bear in mind that what is being looked for is consistency. So the auditing process, whether internal or external, is essentially a “drill-down” exercise, finding out how the reality matches the rhetoric, how much consistency there is between what the planners and the providers say they are achieving and what is being achieved, and how much consensus there is between the learners and the other stakeholders in judging the quality of the outputs, outcomes and impacts.

Table 3: Planning for gathering data for QA audits and self-reviews

Outcome #1	Performance indicator # 1	What are the sources of the data needed?	What are the best methods of collecting these data?	Who is to be responsible for collecting these data?	When and where are these data to be collected?
	Performance indicator # 2	What are the sources of the data needed?	What are the best methods of collecting these data?	Who is to be responsible for collecting these data?	When and where are these data to be collected?
	Performance indicator # 3	What are the sources of the data needed?	What are the best methods of collecting these data?	Who is to be responsible for collecting these data?	When and where are these data to be collected?

The data can be gained through a variety of means. As we show in Table 4 below, each of these approaches has its advantages and disadvantages. This is why QA self-reviews and external reviews typically employ a mix of these methods.

Table 4: Means of gathering data for QA audits and self-reviews

Methods	Purposes	Advantages	Disadvantages
Documentation review	Reviewing the strategic plans, QA and other policy documents, finances, etc.	Ensures that the documented policies and procedures comply with the required standards, etc.	Takes a considerable time. Information may not be well organised or complete. Information may be inaccurate or misleading.
Case studies	Enquiring into how the plans, policies and procedures translate into action in critical areas.	Reveals at the micro-level whether or not plans, policies and procedures are reflected in the day-to-day work of the selected areas. Identifies discrepancies or non-compliance.	The in-depth information and intimate details about particular cases may be insufficient to be generalisable.
Observation	Observing at first hand how the policies and programmes actually operate.	Reviewing a small sample of the operations confirms whether or not the managers, staff and students know and follow the procedures they are meant to be following.	It can be difficult to interpret and categorize the processes, interactions and behaviours.
Questionnaires	Gaining and analysing the staff's and students' views on the policies, procedures, practices and outcomes.	Can be administered to many people. Anonymous and relatively inexpensive to administer. Yields quantitative and qualitative findings.	They may take a long time to create and administer. Response rates may be low. Wording can bias responses. People may not be willing to answer questions or may only answer them superficially. Open-ended questions yield interesting answers but generate large amounts of data for processing and analysing.
Interviews	Learning about the managers', staff's and students' experiences, thoughts and feelings, and how these compare with each other and the other findings.	Interviewing a cross-section of individuals reveals the degree of consistency in following the policies and procedures, as well as the culture and morale of the institution.	Inconsistency in questions can affect the data. Time-consuming. Can only be conducted with relatively few people.
Focus groups	Exploring managers', staff's and students' views on specific experiences or suggestions for improvement.	Sampling the views of different groups in various contexts can give rise to unexpected issues that are illuminating and have high apparent validity.	They can be difficult to convene. Participants' responses may be different from those of non-participants. Non-responses can be problematic.

Analysing and reporting on the data

In a typical organisational or programme quality audit, the auditor, who may be external or internal, first examines the organisational/programme strategic and/or QA plan, and creates a checklist of the quality requirements, measures to be used and data sources to be accessed regarding each of the specified outcomes. S/he then formulates an audit plan, defining the QA requirements, specific groups to be audited, and scope, processes, timeline and location(s) of the audit. S/he then apprises the auditees of this plan and tasks them with helping to provide the required information.

After analysing the data, the auditor draws up a draft report, detailing the review process and findings, rating the quality of the policies, procedures and practices, drawing provisional conclusions, and suggesting ways in which quality might be improved. This draft report is then discussed with the relevant stakeholders to ensure that nothing has been overlooked or misunderstood. The final report is then produced and submitted to the agency or body ultimately responsible for the programme. In the interests of transparency and accountability, this document is usually open to public scrutiny.

A number of internal and external evaluations have evidenced the outcomes of L3F. Speirs (2008) reported on the large number of villagers regularly attending the ICT-based learning sessions; the number of learning materials, CDs, newsletters and Internet/intranet presentations developed; the number of bank loans to the farmers, 60 per cent of whom were women; the improvements in goat-rearing methods, market options and prices, and family circumstances; and the growing involvement of other NGOs and villages with minimal help from L3F. Achieving these outcomes cost COL less than USD 80,000, most of which was spent on local consultancies. All the other resources came from local sources.

A UK-based professional external evaluator, Dr Patrick Spaven (2009), reported:

L3F went operational in the 2003–06 TYP period . . . In mid 2008, despite over a year without COL mediation, significant numbers of farmers and livestock rearers in 3 of the 5 L3F pilot villages were continuing to engage in learning through ICT, and farmers in a 4th village had adopted a similar model. One village suffered an external shock in the form of animal disease, yet recovered. The trigger for the withdrawal of 2 villages from the L3F process was the insolvency of the Internet service provider. However a 3rd village that had been using this provider sought out and established another provider and continues to participate in L3F. This suggests that the model can be self-reinforcing under certain conditions. The underlying reason for the withdrawal of the other 2 seems to have been weak social capital. This is now seen by the L3F thought leaders as a pre-condition for sustained success. It is not so much the number of farmers organised, but their degree of cohesion.

Two new players joined the Tamil Nadu L3F programme at the end of 2007. A grass-roots NGO, Vidayal, brought 250 self-help groups into the

programme to improve and extend their livelihoods. Arul Anandar College, an autonomous educational establishment, proposed to integrate L3F into its curriculum to increase the number of rural development professionals who were able to apply the concept and its components. Their progress was evaluated in July 2008. Less than a year is too short a time to make a confident assessment of a rural development programme. But it is clear that the new entrants are progressing satisfactorily, if more slowly than planned in some respects. (p. 25)

The marketing of L3F has also helped COL to find willing partners to transfer the model to other countries and regions. The Sri Lanka government and 3 universities have agreed to adopt COL's Lifelong Learning for Farmers (L3F) approach to livelihood development. This has also gained credence in Mauritius, Papua New Guinea (PNG) and Uganda where trials are taking place. (p. 4)

Thamizoli et al. (2011) reported on a longitudinal study of L3F in Tamil Nadu from 2008 to 2011. This showed that between 2009 and 2011, 5,000 women farmers had studied dairy methods, goat rearing, horticulture, financial inclusion, business and credit management, and law and human rights by means of mLearning, multimedia, local television, and face-to-face training. The total credit to the L3F farmers and total turnover of the enterprises had increased markedly, and the first batch of women farmers had repaid 90 per cent of the credit with interest within three years rather than the expected five-year period. A meeting of L3F stakeholders in Bodinaikanur, Tamil Nadu in November 2010 attracted 6,000 participants. Bankers attending this meeting were presented with a petition signed by more than 25,000 people involved in agriculture, requesting the Reserve Bank of India and other banks to invest two per cent of their total agricultural and self-help group credit portfolio to provide credit-specific, ICT-based learning packages for agricultural credit and self-help groups. This petition was also forwarded to the Prime Minister of India and other key policy makers to generate discussion at the national level.

Thamizoli et al. (2011) also reported that when various survey instruments were used to measure empowerment and social capital, it was found that:

- The L3F participants had significantly higher value of assets, income and household infrastructure compared to other self-help groups.
- The learning behaviour of L3F participants was significantly different from that of other self-help groups.
- The L3F participants had stronger cognitive social capital in comparison with other self-help groups, and there was a strong correlation between social capital and learning behaviour.
- The level of empowerment was higher amongst the L3F participants, and the focus on learning and social capital, initiated by L3F, had influenced the empowerment process.

QA

Part Five

A QA framework for assessing and assuring outputs, outcomes and impacts

In this section, we suggest some key performance indicators (KPIs) or critical success factors (CSFs) that you could use in assessing and assuring the outputs (Table 5), outcomes (Table 6) and impacts (Table 7) of NFE programmes in regard to the learners, the learning provision and the communities for whom these programmes are intended. In Table 8 we also suggest some KPIs or CSFs for judging inputs.

In answer to the questions “How many activities?” and “How many criteria?” we suggest you follow the advice of Bacsich (2006) and use a “pick and mix” approach. As shown in the earlier case studies, the purposes, nature and circumstances of NFE programmes vary widely. So we suggest that you select and measure those KPIs or CSFs that you judge will yield the strongest evidence on whether or not you have achieved the specific intended outputs, outcomes or impacts, and help you gain more or continued funding and support. You can of course always customise or add to these KPIs and CSFs.

If you have too many items, you are unlikely to pay sufficient attention to the ones that are of high importance. Also, it is better to choose KPIs that are actionable — the things that will save time, make more efficient use of resources, or increase the impact and cost-effectiveness of the programme. It is also very useful to look for the predictive KPIs rather than indicators that are historical and will never apply again. And it is important to consider the individuals or groups who are accountable for the various outcomes, and who have sufficient authority to take whatever corrective action is needed to align the outcomes with the expectations.

Some KPIs or CSFs have a natural lifecycle. When first introduced, they are energising and focus attention on what needs to be accomplished or improved upon. But as time goes on, and it becomes apparent to everyone that these particular outputs, outcomes and impacts are being achieved and are likely to stay that way, it’s time to refresh, revise or discard these KPIs and embark on the quality cycle once again, but in a different way.

As we have shown in Part Four, it is useful to employ a Likert scale, contextualised by narrative. In making your comments, again avoid such jargon as “best practice” and “cutting edge.” These are subjective statements and no-one really knows what

they mean anyway. Stick to the facts and make sure there is evidence to support all your judgements and statements. Otherwise, the quality of your QA will come into question.

Table 5: A QA framework for assessing outputs

Outputs	Performance indicators
In the learners	<ul style="list-style-type: none"> • The programme attracted the numbers and types of participants planned for. • The learners' attendance, retention, motivation and participation levels were high. • The programme made use of the learners' tacit knowledge as well as their explicit knowledge. • The knowledge, skills and attitudes aimed for were reflected in the learners' behaviours during the programme.
In the learning provision	<ul style="list-style-type: none"> • The planners and providers worked with the targeted groups to assess their knowledge needs, abilities, culture and circumstances. • The needs assessment was sound and accurate. • Strong linkages/partnerships were achieved with educational/training providers and other agencies and groups interested in the specific development. • These linkages/partnerships helped to engage the communities, recruit learners/trainees and provide the learning activities, learning materials and support services. • The managers, teachers/trainers, facilitators/mentors, technical assistants and other support personnel were recruited with care. • The managers, teachers/trainers, facilitators/mentors, technical and other support personnel were appropriately trained in the systems, methods and technologies to be used in the programme. • The aims and potential benefits of the programme were widely and effectively marketed and promoted. • There was sound formative and summative evaluation of the programme. • The objectives of the education/training were realised. • The programme ran to schedule. • The teachers/trainers and facilitators/mentors performed well. • The course, course materials, classes, practical training activities, etc. were well conceived and well implemented. • The choice of technology, infrastructure and means of delivery were appropriate. • The OER were appropriate or appropriately localised and customized. • The distribution of the courseware and learning support services were well managed. • The management and administrative support was sound. • Funding matters were well and transparently managed. • The technical support was well managed and operated. • The programme was based upon a sound business plan.
Within the community	<ul style="list-style-type: none"> • The planners and providers involved the community leaders and other stakeholders who understood the needs, potential and limitations, as well as the most appropriate means of communicating and working with the communities. • Local "champions" were involved to achieve maximum interest and participation. • The learners/community were involved in the design, implementation, management and evaluation of the programme. • Sound partnerships were established with local educational institutions, NGOs, businesses, media channels, etc.

Table 6: A QA framework for assessing outcomes

Outcomes	Performance indicators
In the learners	<ul style="list-style-type: none"> • The knowledge, skills and attitudes aimed for were reflected in the learners' behaviours following the programme. • The applications of the new learning were shown to be effective and beneficial to the learners and/or community. • The programme empowered the participants and engendered a new sense of self-worth and enterprise. • The participants continued functioning as a community of practice or virtual community. • The participants undertook similar programmes on their own initiative.
In the learning provision	<ul style="list-style-type: none"> • The new approaches were shown to be cost-effective and sustainable. • The programme acted as a catalyst for further developments. • The programme attracted other partners and stakeholders.
In the community	<ul style="list-style-type: none"> • The participants recommended the programme to other community groups. • Other community groups requested or adopted the programme.

Table 7: A QA framework for assessing impacts

Impacts	Performance indicators
In the learners	<ul style="list-style-type: none"> • Continuing motivation, persistence and building of skills and knowledge. • More critical reflection. • More experiential and collaborative learning. • Learning communities engaging in lifelong learning. • Increased creativity and adaptability.
In the learning provision	<ul style="list-style-type: none"> • The new approaches continued to be shown as cost-effective and sustainable. • The programme continued to act as a catalyst for further developments. • The programme continued to attract other partners and stakeholders.
In the community	<ul style="list-style-type: none"> • Improved attitudes, knowledge and skills. • More active citizenship and personal development. • Greater capacity to manage uncertainty. • Increased community enterprise and capability. • More economic resilience and self-reliance. • Increased enterprise and competitiveness. • Greater productivity. • Improved employment or self-employment prospects. • Learning pathways into formal education for those wishing to further their education. • Enhanced social inclusion. • Learning to live together and with other communities. • Conflict resolution. • Communication across and within cultures and sub-cultures. • Improved healthcare and child care. • Increased opportunities for women. • Less pollution and environmental degradation. • Greater food security. • Eco-enterprises, eco-preneurship and eco-jobs. • Less corruption. • More micro-credit programmes.

Assessing inputs

As we suggested earlier, the quality of the outcomes will very largely be a consequence of the quality of the inputs (although there can also be other environmental factors that are outside the control of the providers). You will of course need to think about inputs and their adequacy if outcomes are not realised. But rather than starting by using these inputs as predictors of quality, we suggest you assess the outputs, outcomes and impacts first, and then refer back to the quality of the inputs to see where, why and how things went wrong or right. Traditionally, measures of quality were exclusively or largely based upon the inputs because they were easy to observe, measure or compare, and believed to be highly correlated with educational success. But essentially, QA is a matter of, as James Ling said, “Don’t tell me how hard you work. Tell me how much you get done,” or as Peter Drucker observed, “Quality in a service or product is not what you put into it. It’s what the customer gets out of it.”

Table 8: A QA framework for assessing inputs

Inputs	Performance indicators
Policy and planning	<ul style="list-style-type: none"> • The provider has a clear sense of purpose and direction, based on national priorities/ community needs and the quality demands of cost-effective educational provision. • There are both a rationale for and relevant systems for the use of distance education to achieve the programme’s aims for the targeted learners. • The provider has consulted with all of the stakeholders to ensure that the processes and outcomes accord with their needs and expectations. • The provider has ensured that learner support mechanisms are in place and contingencies have been planned for. • The provider has developed a QA framework and implemented a QA procedure. • There are policies to ensure that the physically challenged members of the community, women, and other disadvantaged or marginalised persons have equal access to the programme. • Where appropriate, learning pathways and/or credit/certification have been planned for.
The learners	<ul style="list-style-type: none"> • There are appropriate publicity, recruitment and enrolment procedures for the learners. • There is up-to-date and relevant information about the learners, their ages and gender, their needs, their prior learning and experience, and their circumstances. • There are records of the learners, their contact details and their performance on the programme. • There are incentives for the learners to study.
Management and administration	<ul style="list-style-type: none"> • There is effective, transparent and democratic management of the programme, human resources and communications. • The programme is supported by efficient administrative systems, both at the centre and in the community. • There are clear lines of accountability to all of the stakeholders. • The staff, learners, community and external stakeholders are represented in the governance of the programme. • There are efficient and effective systems for communication with the stakeholders. • Enquiries, complaints and problems are dealt with quickly, efficiently and effectively. • There are centres and systems in place for remote learners.

Inputs	Performance indicators
Staffing	<ul style="list-style-type: none"> • The teachers, trainers, facilitators, mentors, and the local managers and administrators have been carefully selected and appropriately trained for the programme. • The teachers, trainers, facilitators, mentors, and the local managers and administrators are appropriately recognized and rewarded for their contributions. • There are records of all staff and their performance on the programme.
Technology and infrastructure	<ul style="list-style-type: none"> • The technology and infrastructure are well provided for. • The technological and infrastructure provision are inclusive. • There is an appropriate mix of technologies and technology-based delivery methods. • The equipment and facilities are well managed and are maintained and secured against theft, misuse or damage. • Staff and learners are trained in the use of the equipment, facilities, and communication and information systems. • There are emergency procedures in the event that the primary communication fails.
Funding and budgeting	<ul style="list-style-type: none"> • The funding and sources of funding are appropriate and reliable. • Appropriate budgetary processes and financial procedures are in place, known and followed. • Accounting and auditing systems are in place to compare goals, budgets, outcomes and impacts. • The costs of study are affordable to the community and learners.
Programme development	<ul style="list-style-type: none"> • The programme is relevant to the national, or community, or individual needs. • The programme is appropriately developed or adapted to the learner profile. • Relevant stakeholders are involved in conceptualising the programme. • The programme is flexible, accessible and responsive to changing needs and circumstances. • The programme is culturally appropriate. • The programme combines an appropriate mix of teaching, group study, independent study and practical work. • The course, materials, learner support and assessment are well planned and well implemented. • The programme is evaluated regularly. • There is a reliable system of costing programme and course development and evaluation. • The location, timing and pace of the programme are appropriate to the learners and their circumstances.
Teaching and learning	<ul style="list-style-type: none"> • The teachers/trainers are committed to quality teaching. • The teaching and learning is learner-centred. • The teaching and learning takes account of the learners' tacit or informal learning and prior experience. • The teaching and learning makes appropriate use of up-to-date theory and practice, as well as empirical and indigenous knowledge. • There are appropriate time/work patterns in the teaching and learning provision. • There are appropriate workload factors in the teaching and learning provision. • The forms of teaching and learning used are culturally appropriate and inclusive. • Feedback, reinforcement and reward are provided. • The quality of the teaching and learning is judged by peer review or feedback from the learners.

Inputs	Performance indicators
Collaborative relationships	<ul style="list-style-type: none"> • There is proactive and innovative collaboration with governmental and non-governmental educational/training providers, funding bodies, media and telecommunications agencies, and others who can support the programme. • There is effective networking with all of these stakeholders. • There is sharing of accommodation, facilities, expertise, technology, courseware and learner support. • There are collaborative systems for supporting workplace learning, fieldwork and practical work.
Quality assurance	<ul style="list-style-type: none"> • There is a QA framework that integrates policy, planning and practice, and employs a cycle of planning, implementing, monitoring and reporting to ensure that all stakeholder needs and expectations are met. • Internal QA processes are well articulated with external QA processes. • There are clear QA systems, routines and procedures in place, and the staff and learners are familiar with these. • Staff, learners and other stakeholders are involved in the QA process. • A quality culture is nurtured in the programme. • Staff development is seen as fundamental to a QA culture. • There is benchmarking against similar programmes to review priorities and make further improvements.
Follow-through to the learning	<ul style="list-style-type: none"> • There are learning pathways for those learners wishing to undertake further non-formal or formal study. • There is encouragement and support for the learners to apply their new knowledge, skills and attitudes in community, family or work settings. • The subsequent application of the learners' new knowledge, skills and attitudes in community, family or work settings is monitored to assess the longer-term outcomes and impacts of the programme.

QA

Part Six

Conclusions

QA is concerned with making sure that we are doing the right things and doing them the right way. In describing the whys and hows of QA in this toolkit, we hope that we have managed to convince you that QA for NFE is both essential and relatively easy to implement — especially if it is planned for right at the very start — by the donors sponsoring programmes, by the applicants for programme funding, and by those planning and implementing the programmes. With acknowledgements to MacNamara (2011), from whom the following have been adapted, we feel that it is important to dispel some common myths about QA.

Myth #1: QA is a complex science. I don't have time to learn it!

Our response: QA is a practical activity. If you can run an organisation, project or programme, you can surely implement an evaluation process!

Myth #2: It's an event to get over with and then move on!

Our response: QA is an ongoing process. It takes time to effectively develop, test and polish your QA system. However, many of the activities required to plan and carry out QA are activities that you're either already doing or should be doing.

Myth #3: QA is a whole new set of activities — we don't have the resources.

Our response: Most of these QA activities are normal management activities that need to be carried out anyway in order to evolve your organisation, project or programme to the next level.

Myth #4: There's a "right" way to do QA. What if I don't get it right?

Our response: Each QA process is somewhat different in some way, depending on the needs and nature of the organisation, project or programmes. Consequently, each donor or programme/project planner can become an "expert" in their own form of QA planning and implementation. Therefore, start simple and learn as you go along in your QA work.

Myth #5: Funders will accept or reject my QA plan.

Our response: Enlightened funders will or should work with you, for example, to polish your outcomes, indicators and outcomes targets. If your organisation, project

or programme is new, then you are very likely to need some help — and time — to develop and polish your QA plan.

Myth #6: I always know what my learners and other stakeholders need — I don't need QA to tell me whether or not I'm really meeting the needs of my clients.

Our response: The fact is that you aren't always aware of what you don't know about the needs of your learners and stakeholders. A carefully constructed QA framework ensures that there are systems and structures in place in your organisation, project or programme that enable you and your colleagues and associates to remain focused on the current needs of these all-important stakeholders. Also, you and those you work with won't always be around, and a legacy of QA ensures that the ideas and practices of your organisation, project or programme are transparent, accountable, sustainable and transferable.

It is clear that NFE using alternative means of delivery has enormous potential. However, it is also clear that in some instances it is failing to fulfil this potential due to a lack of attention to QA, both at the outset and throughout the life of the projects and programmes. As a consequence, they fail to meet their target, fail to convince funders and other stakeholders of their value and sustainability, and let down the countless millions throughout the world who stand to gain from NFE.

References

- ACE Electoral Knowledge Network. (n.d.). *National curricula for civic education*. In *The ACE Electoral Knowledge Network*. Retrieved from aceproject.org/ace-en/topics/ve/veb/veb03/veb03a
- ADB. (2007). Radio dramas help in HIV/AIDS fight. In *Asian Development Bank* (News and Events, 7 March 2007). Retrieved from <http://beta.adb.org/news/radio-dramas-help-hiv-aids-fight>
- Afkhami, M. (Ed.). (2002). *Toward a compassionate society*. Bethesda, MD: Women's Learning Partnership. Retrieved from www.learningpartnership.org/docs/copanthology.pdf
- Aguilar, P., & Retamal, G. (1998). *Educational response in complex emergencies: A discussion document*. Geneva: International Bureau of Education. Retrieved from unesdoc.unesco.org/images/0012/001248/124828e.pdf
- Al-Samarrai, S., & Bennell, P. (2003). *Where has all the education gone in Africa? Employment outcomes among secondary schools and university leavers*. Brighton, UK: Poverty and Social Policy Team, Institute of Development Studies, University of Sussex.
- America's Development Foundation. (2011). Civic education – selected country highlights. In *America's Development Foundation* (Highlights). Retrieved from www.adfusa.org/content/highlight/detail/633
- Amnesty International. (2010). *Human rights education in non-formal settings: Lessons learned from the Rights Education Action Programme*. London: Amnesty International Secretariat. Retrieved from <http://www.amnesty.org/en/library/asset/POL32/001/2010/en/d01a7312-b301-4c33-b4e4-5b0ea2b9a30e/pol320012010en.pdf>
- Atkins, D., Brown, J. S., & Hammond, A. (2007). *A review of the open educational resources (OER) movement: Achievements, challenges, and new opportunities*. Report to The William and Flora Hewlett Foundation. Palo Alto, CA: Hewlett Press. Retrieved at <http://www.hewlett.org/uploads/files/ReviewoftheOERMovement.pdf>
- AusAID. (n.d.). Non-formal education program for mainstreaming disabled children in Cambodia: Case study. In *AusAID Global Education*. Retrieved from www.globaleducation.edna.edu.au/archives/secondary/casestud/cambodia/1/cambodia-school.html
- AVERT. (2011). Worldwide HIV & AIDS statistics commentary. Retrieved from www.avert.org/worldstatinfo.htm#
- Bacsich, P. (2006). *Benchmarking e-learning: The pick & mix approach* [PowerPoint slides]. Presentation to the Higher Education Academy Benchmarking Pilot Launch Meeting, London, 20 January 2006. Retrieved from http://www2.le.ac.uk/projects/elearningbenchmarking/folder-vtb-pjw-vkd/file-529-7jw-vkd/at_download/file
- Baggaley, J. P. (2004). *Distance learning technologies: Deploying Canadian and Southern technology engines to build an Asian research network*. Consultant's Report, IDRC-CDRI. Ottawa: International Development Research Centre. Retrieved from www.idrc.ca/uploads/user-s/11280236271JPB-PAN_Asia_edit.pdf

- Bailey, A., & Ngwenyama, O. (2010). Community mediation and violence prevention through telecentre usage: ICTs mediating the 'Border Line'. In *Proceedings of SIG GlobDev Third Annual Workshop, Saint Louis, USA, December 12, 2010*. Retrieved from www.globdev.org/files/Proceedings-Third%20Annual%20SIG%20Globdev%20Workshop/10-PAPER-Bailey-Community-Mediation.pdf
- Baksh, R., Munro, T., & Robb, C. (2009). Introduction: Setting the context. In R. Baksh & T. Munro (Eds.), *Learning to live together: Using distance education for community peacebuilding*. Vancouver, Canada: The Commonwealth of Learning. Retrieved from http://www.col.org/PublicationDocuments/pub_Learning_To_Live_Together_web.pdf
- Balasubramanian, K. (2010). Lifelong Learning for Farmers (L3F) [Powerpoint presentation]. Vancouver: The Commonwealth of Learning.
- Balasubramanian, K., Thamizoli, P., Umar, A., & Kanwar, A. (2010). Using mobile phones to promote lifelong learning among rural women in Southern India. *Distance Education*, 31(2), 193–209.
- BBC World Service Trust. (2009). BBC Janala project overview. London: The BBC World Service Trust. Retrieved from http://www.bbc.co.uk/worldservice/trust/whatwedo/where/asia/bangladesh/2010/01/100115_bangladesh_janala_project_overview.shtml
- Bender, L. (2011). *Innovations in emergency education: The IRC in the Democratic Republic of Congo. A commissioned background report prepared for the global monitoring report, 2011*. Paris: UNESCO. Retrieved from unesdoc.unesco.org/images/0019/001907/190774e.pdf
- Bhavsar, M. (2011). Up close and personal with TulaSalud's m-health work in Guatemala. Posted 9 March 2011 in *MobileActive.org*. Retrieved from www.mobileactive.org/case-studies/close-and-personal-tulasaluds-m-health-work-guatemala
- COL. (n.d.). *Generic framework of Lifelong Learning for Farmers*. Vancouver, Canada: Commonwealth of Learning.
- COL. (2002). Checklist for addressing gender-related barriers to ICTs. Vancouver, Canada: Commonwealth of Learning. Retrieved from http://www.col.org/SiteCollectionDocuments/Checklist_Addressing_Gender.pdf
- Daniel, J., & Alluri, K. (2006). Using technology to expand learning: Helping farmers prosper. In *Commonwealth Finance Ministers Reference Book*. London: Henley Media Group, published on behalf of the Commonwealth Secretariat. Retrieved from www.col.org/SiteCollectionDocuments/L3Farmers_Using_Technology.pdf
- David, S., & Asamoah, C. (2011). Video as a tool for agricultural extension in Africa: A case study from Ghana. *International Journal of Education and Development Using Information and Communication Technology*, 7(1), 26–41. Retrieved from ijedict.dec.uwi.edu/viewarticle.php?id=1152
- Deming, W. E. (1986). *Out of the crisis*. Cambridge, MA: MIT Center for Advanced Engineering Study.
- Dhanarajan, G. (2000). Preface. In R. Siaciwena (Ed.), *Case studies of non-formal education by distance and open learning*. Vancouver, Canada: Commonwealth of Learning/London: Department for International Development. Retrieved from <http://www.col.org/resources/publications/Pages/detail.aspx?PID=279>
- Dhungana, R. K. (2010). Peace education in Nepal. In *Inter-agency Network for Education in Emergencies*. Retrieved from www.ineesite.org/index.php/post/blog_peace_education_in_nepal
- Dodds, T. (1996). *The use of distance learning in non-formal education*. Vancouver, Canada: Commonwealth of Learning/Cambridge, UK: International Extension College. Retrieved from <http://www.col.org/resources/publications/Pages/detail.aspx?PID=344>

- Easton, P., Sidikou, M., Aoki, A., & Crouch, L. (2003). *Rethinking World Bank policy and practice in support of adult and non-formal education*. HDNED EFA/Adult Outreach World Bank Working Paper. Washington, DC: World Bank. Retrieved from www.unesco.org/education/uie/news/workingpaper.pdf
- EDC. (2003). Information kiosks in rural India: Business provides franchise opportunities for young entrepreneurs. In *Education Development Center* (Newsroom). Retrieved from www.edc.org/newsroom/articles/information_kiosks_rural_india
- Edirisingha, P. (1999). Open and distance learning for basic and non-formal education in developing countries. Paper presented at the Pan-Commonwealth Forum on Open Learning, Bandar Seri Begawan, Brunei Darussalam, 1–5 March 1999. Retrieved from www.col.org/forum/PCFpapers/Edirisingha.pdf
- Encyclopedia of Death and Dying*. (2011). Life expectancy. Retrieved from www.deathreference.com/Ke-Ma/Life-Expectancy.html
- European Commission. (2005). *The new SME definition. User guide and model declaration*. Enterprise and industry publications. Retrieved from http://ec.europa.eu/enterprise/policies/sme/files/sme_definition/sme_user_guide_en.pdf
- European Council. (2000). *Presidency conclusions*. Lisbon European Council. 23–24 March 2000. Retrieved from www.europarl.europa.eu/summits/lis1_en.htm
- FAO. (2005). *The state of food insecurity in the world 2005. Eradicating world hunger – key to achieving the Millennium Development Goals*. Rome: Food and Agriculture Organisation of the United Nations. Retrieved from <http://www.fao.org/docrep/008/a0200e/a0200e00.htm>
- FAO. (2011). *The state of food and agriculture 2010–2011. Women in agriculture: Closing the gender gap for development*. Rome: Food and Agriculture Organisation of the United Nations. Retrieved from www.fao.org/docrep/013/i2050e/i2050e00.htm
- FAO, IFAD, & World Bank. (2008). *Gender in agriculture sourcebook*. Retrieved from <http://siteresources.worldbank.org/INTGENAGRLIVSOUBOOK/Resources/CompleteBook.pdf>
- Farm Radio International. (2010). *The effect of participatory radio campaigns on agricultural improvement uptake: A preliminary case study assessment. African Farm Radio Research Initiative 2009*. Retrieved from www.farmradio.org/english/partners/afrii/casestudy-report.pdf
- Fennes, H., & Otten, H. (2008). *Quality in non-formal education and training in the field of European youth work*. The Youth Partnership Programme of the European Commission and the Council of Europe/SALTO-Youth Training and Cooperation Resource Centre. Retrieved from www.salto-youth.net/downloads/4-17-1615/TrainingQualityandCompetenceStudy.pdf
- Ferreira, F. (2010). *Quality assurance toolkit for open schools*. Vancouver, Canada: Commonwealth of Learning. Retrieved from www.col.org/PublicationDocuments/pubQAOSToolkit.pdf
- Fuchs, R. (2011). So few lessons learned? Quality assurance in the global telecentre movement. In I. Jung & C. Latchem (Eds.), *Quality assurance and accreditation in distance education and e-learning: Models, policies and research*. London & New York: Routledge.
- Green, L., & Trevor-Deutsch, L. (2002). *Women and ICTs for open and distance learning: Some experiences and strategies from the Commonwealth*. Vancouver, Canada: Commonwealth of Learning. Retrieved from www.col.org/SiteCollectionDocuments/women%20and%20ICTs.pdf
- Grubb, B. (2006). eTUKTUK takes internet and radio to Sri Lankan villages. Paris: UNESCO. Retrieved from http://portal.unesco.org/ci/en/ev.php-URL_ID=21987&URL_DO=DO_TOPIC&URL_SECTION=201.html

- GSMA Development Fund. (2010). *mLearning: A platform for educational opportunities at the base of the pyramid*. London: GSMA Development Fund. Retrieved from www.gsmworld.com/documents/mLearning_Report_Final_Dec2010.pdf
- Hallak, J. (1990). *Investing in the future: Setting educational priorities in the developing world*. Paris, France & Oxford, UK: UNESCO, International Institute for Educational Planning.
- Hanifan, L. J. (1916). The rural school community center. *Annals of the American Academy of Political and Social Science*, 67, 130–138.
- Harvey, L., & Green, D. (1993). Defining quality. *Assessment and Evaluation in Higher Education*, 18(1), 9–34.
- Hiranandani, V., & Sonpal, D. (2010). Disability, economic globalization and privatization: A case study of India. *Disability Studies Quarterly*, 30(3/4). Retrieved from www.dsqsds.org/article/view/1272/1302
- IDRC. (2005). *Final technical report: ICT-supported distance education, Viet Nam*. Ottawa, Canada: International Development Research Centre. Retrieved from dls.cna.nl.ca/pdfs/Client%20Story%20-%2002%20-%20Viet%20Nam%20ICT%20Joint%20Final%20Technical%20Report.pdf
- IDRC. (2006). *telecentre.org business plan. Period 2006–2009*. Ottawa: International Development Research Centre. Retrieved from <http://www.slideshare.net/radenluki23/telecentre-org-business-plan-final-public-version>
- IICD. (2010). IICD supported programme: ICT integration multimedia & recording – Zambia. In *International Institute for Communication and Development (Projects)*. Retrieved from www.iicd.org/projects/zambia-cypro
- IICD. (2011). IICD supported programme: Involving local youth councils in good practices in local governance. In *International Institute for Communication and Development (Projects)*. Retrieved from www.iicd.org/projects/ecuador-ffla
- ILO. (2008). *Skills development through community-based rehabilitation (CBR) – A good practice guide*. Geneva: International Labor Organisation. Retrieved from www.ilo.org/wcmsp5/groups/public/@ed_emp/@ifp_skills/documents/publication/wcms_132675.pdf
- infoDev. (2011a). Teacher opens doors for youth in Botswana using infoDev business incubation training. Published 20 June 2011. Washington, DC: The World Bank. Retrieved from www.infodev.org/en/Article.729.html
- infoDev. (2011b). Cutting-edge ICT incubator set to unleash entrepreneurship in Tanzania. Published 1 November 2011. Washington, DC: The World Bank. Retrieved from <http://www.infodev.org/en/Article.770.html>
- International Planned Parenthood Federation. (2010). *Men are changing: Case study evidence on work with men and boys to promote gender equality and positive masculinities*. London: International Planned Parenthood Federation. Retrieved from www.ippf.org/NR/rdonlyres/36B8FD71-BB77-45D6-8424-B887323D6ED7/0/MenAreChanging.pdf
- IRRI/CIMMYT. (2008). *Cereal knowledge bank*. International Rice Research Institute/ International Wheat and Maize Improvement Center. Retrieved from: <http://www.knowledgebank.irri.org>
- Ivins, T. Z. (2011). *Localization of open educational resources (OER) in Nepal: Strategies of Himalayan knowledge-workers*. (Doctoral dissertation). Brigham Young University. Retrieved from <http://gradworks.umi.com/3450142.pdf>
- Jacshke, L. (2010). Let's get informal: Mobile phones for adult basic education in West Africa. In *Educational Technology Debate* (mEducation Initiatives). Published September 2010. Retrieved from edutechdebate.org/meducation-initiatives/lets-get-informal-mobile-phones-for-adult-basic-education-in-west-africa

- Kaner, C. (1996). Quality cost analysis: Benefits and risks. *Software QA*, 3(1), 23. Retrieved from http://www.kaner.com/pdfs/Quality_Cost_Analysis.pdf
- Khare, A. (2010). Non-formal vocational training and national development: The contribution of IGNOU in North East India. Retrieved from wikieducator.org/images/3/34/Asha_Khare.pdf
- Knowles, M. (1975). *Self-directed learning. A guide for learners and teachers*. Englewood Cliffs, NJ: Prentice Hall/Cambridge.
- Latchem, C., & Walker, D. (2001). *Telecentres: Case studies and key issues*. Vancouver, Canada: The Commonwealth of Learning. Retrieved from www.col.org/resources/publications/Pages/detail.aspx?PID=140
- Leeming, D. (2009, October 23). Community media and health promotion. In *Isabel Province Youth Learning Network*. Retrieved from <http://isabel-youth.ning.com/profiles/blogs/community-media-and-health>
- Librero, F. (2006). Innovative ICTs in the ASEAN region. In J. Baggaley (Ed.), *Information and communication technology for social development* (pp. 55–68). Jakarta: ASEAN Foundation.
- MacNamara, C. (2011). *Basic guide to outcomes-based evaluation for nonprofit organizations with very limited resources*. Free Management Library. Retrieved from <http://managementhelp.org/evaluation/outcomes-evaluation-guide.htm>
- Making Cents International. (2008). *Youth microenterprise and livelihoods: State of the field*. Washington, DC: Making Cents International. Retrieved from <http://www.imaginationations.org/documents/MakingCentsInternationalYouthEnterpriseLivelihoods021108.pdf>
- McCaffery, J. (2005). Using transformative models of adult literacy in conflict resolution and peacebuilding processes at community level: Examples from Guinea, Sierra Leone and Sudan. *Compare*, 35(4), 443–462.
- McDonald, B. (2009). Technical evaluation report 66. Appropriate distance education media in the Philippines and Mongolia. *The International Review of Research in Open and Distance Learning*, 10(3), 1–5. Retrieved from www.irrodl.org/index.php/irrodl/article/download/721/1243
- McLean, S. (2001). *Distance education and distance learning: A framework for the Food and Agriculture Organisation of the United Nations*. Sustainable Development Department, Food and Agricultural Organisation of the United Nations. Retrieved from www.fao.org/sd/2001/KN0901a_en.htm
- Merisotis, J. P., & Phipps, R. A. (2000). *Quality on the line: Benchmarks for success in Internet-based distance education*. Washington, DC: The Institute for Higher Education Policy. Retrieved from www.ihep.org/Publications/publications-detail.cfm?id=69
- Mishra, S., Jena, S. S., & Sadiman, A. S. (2011). Quality assurance in open schooling: National Institute of Open Schooling, India and Open Junior Secondary School, Indonesia. In I. Jung & C. Latchem (Eds.), *Quality assurance and accreditation in distance education and e-learning: Models, policies and research*. London & New York: Routledge.
- Miyazawa, I. (2009). Literacy promotion through mobile phones. Conference paper for 13th UNESCO-APEID International Conference and World Bank-KERIS High Level Seminar on ICT in Education, 15–17 November 2009. Hangzhou, PR China.
- Nagarajan, G. (2005). *Microfinance, youth and conflict: Emerging lessons and issues*. Washington, DC: USAID. Retrieved from www.microfinancegateway.org/gm/document-1.9.27071/31355_file_31.pdf

- Nanda, S., & Arunachalam, S. (2009). *Reaching the unreached: Community based village knowledge centres & village resource centres*. Chennai: Jamsetji Tata National Virtual Academy (NVA), M S Swaminathan Research Foundation. Retrieved from <http://www.suchit.net/books/Reaching-the-Unreached.pdf>
- Nath, V. (2001). Empowerment and governance through information and communication technologies: Women's perspective. *International Information and Library Review*, 33, 317–339. Retrieved from http://www.iiav.nl/earticles/2001/Empowerment_and_Governance_through.pdf
- News International. (2011, June 15). 57 flood-affected youth imparted skill training. Retrieved from www.thenews.com.pk/TodaysPrintDetail.aspx?ID=52560&Cat=7&dt=6/15/2011
- Nguyen, H. Q., & Pirozzi, R. (2006). Understanding quality cost. In *LogiGear Corporation*. Retrieved from www.logigear.com/newsletter-2006/298-understanding-quality-cost.html
- Nirantar. (2008). About Khabar Lahariya. New Delhi: Nirantar. A Centre for Gender and Education. Retrieved from http://www.nirantar.net/khabar_about.htm
- Nonaka, I. (1991). The knowledge-creating company. *Harvard Business Review*, November–December, 96–104.
- OECD. (2002a). *Glossary of key terms in evaluation and results-based management*. Paris: OECD. Retrieved from <http://www.oecd.org/dataoecd/29/21/2754804.pdf>
- OECD. (2002b). *The OECD small and medium enterprise outlook, 2002 edition*. Paris: OECD Publications. Retrieved from http://www.oecd.org/document/39/0,3746,en_2649_34197_2483303_1_1_1_1,00.html
- OECD-DAC & World Bank. (2007). *Emerging good practice in managing for development results. Sourcebook* (2nd ed.). Paris: OECD & Washington, DC: World Bank. Retrieved from www.mfdr.org/Sourcebook/2ndEdition/SourceBook_2E_17_Sept_07_EN.pdf
- Perraton, H. (2000). *Open and distance learning in developing countries*. London & New York: Routledge.
- Plan. (2008). *Paying the price: The economic cost of failing to educate girls*. Woking, UK: Retrieved from plan-international.org/files/global/publications/education/girls_education_economics.pdf
- Powers, T. (2008). *Recognizing ability: The skills and productivity of persons with disabilities. Literature review*. Geneva: International Labor Organisation. Retrieved from www.ilo.org/public/english/employment/download/wpaper/wp3.pdf
- Pridmore, P., & Yates, C. (2006). *The role of open, distance and flexible learning (ODFL) in HIV/AIDS prevention and mitigation for affected youth in South Africa and Mozambique*. DFID Educational Papers: Researching the Issues, No. 61. London: UK Department for International Development.
- Pringle, I., Rosato, M., & Simbi, C. (2009). Community learning: Perspectives on the role of media in non-formal education. In *Commonwealth Education Partnerships 2009/10*. London: Commonwealth Secretariat (pp. 178–182).
- Rahman, S. A. U. (2000). *Taking control: Women emerge from poverty*. Mumbai: Asian South Pacific Bureau of Adult Education. Retrieved from www.paklife.net/nfer_library/Reports/4-41.pdf
- Ramos, A., Nangit, G., Ranga, A., & Triñona, J. (2007). ICT-enabled distance education in community development in the Philippines. *Distance Education*, 28(2), 213–229. Retrieved from unpan1.un.org/intradoc/groups/public/documents/unpan/unpan037291.pdf

- Ramos, A. J., & Triñona, J. P. (2009). Mobile technology in nonformal distance education. In J. Baggaley & T. Belawati (Eds.), *Distance education technologies in Asia* (pp. 192–213). New Delhi: SAGE Publications.
- Reddi, U., & Dighe, A. (2000). Literacy and adult education through distance and open learning. In C. Yates & J. Bradley (Eds.), *Basic education at a distance* (pp. 155–172). London & New York: Routledge/Vancouver: Commonwealth of Learning.
- Robinson, B. (1999). Open and distance learning in the Gobi Desert: Nonformal education for nomadic women. *Distance Education: An International Journal*, November 1999. Retrieved from www.eldis.org/vfile/upload/1/document/0708/DOC8922.pdf
- Rogers, A. (1996). NFE, development and learning. Unit 2 of Course 7, *Non-formal and adult basic education at a distance*, in University of London/IEC External Diploma/MA in Distance Education. University of London/IEC, Cambridge.
- Rogers, A. (2004). Looking again at non-formal and informal education – towards a new paradigm. *The encyclopaedia of informal education*. Retrieved from www.infed.org/biblio/non_formal_paradigm.htm
- Roman, R., & Colle, R. D. (2002). *Themes and issues in telecentre sustainability*. Development Informatics working paper series. Paper No. 10. Manchester: University of Manchester Institute for Development Policy and Management. Retrieved from unpan1.un.org/intradoc/groups/public/documents/nispacee/unpan015544.pdf
- RUHSA Department. (2000). *Developing HIV/AIDS peer educators in a rural community in Tamil Nadu, India*. Vellore, Tamil Nadu: RUHSA Department, Christian Medical College and Hospital. Retrieved from www.unisanet.unisa.edu.au/art/Frank/Developing%20HIV%20peer%20educators.pdf
- Satyanarayanan, S. (2011, May 16). Nokia upgrades Life Tools with Health Info in India. *Afro Asian Business Chronicle*. Retrieved from www.aabc.co.in/india/1847-nokia-upgrades-life-tools-with-health-info-in-india.html
- Savariaud, S. (2004, July 1). Staying alive in Senegal. *AIDSLink*, 86. Retrieved from www.globalhealth.org/publications/article.php3?id=1180
- Scottish Government. (2004). Working and learning together to build stronger communities. Edinburgh: Scottish Executive Guidance for Community Learning and Development. Retrieved from www.scotland.gov.uk/Resource/Doc/47210/0028730.pdf
- SDdimensions. (2000, September). Mushroom production training for disabled people: a progress report. Rome, Italy: Sustainable Development Department, Food and Agriculture Organisation of the United Nations. Retrieved from www.fao.org/sd/PPdirect/PPre0072.htm
- Senge, P.M. (1990). *The fifth discipline*. London: Century Business.
- Siaciwena, R. (Ed.). (2000). *Case studies of non-formal education by distance and open learning*. Vancouver, Canada: Commonwealth of Learning/London: Department for International Development. Retrieved from www.col.org/PublicationDocuments/pub_Case_Studies_Non-Formal_Education.pdf
- Sibalwa, D. (2000). Zambia: Radio farm forums. In R. Siaciwena (Ed.), *Case studies of non-formal education by distance and open learning* (pp. 114–132). Vancouver: Commonwealth of Learning/London: Department for International Development. Retrieved from www.col.org/PublicationDocuments/pub_Case_Studies_Non-Formal_Education.pdf
- Sinclair, M. (2002). *Planning education in and after emergencies*. Fundamentals of Educational Planning 73. Paris: UNESCO/London: Department for International Development. Retrieved from www.inesite.org/toolkit/INEEcms/uploads/1091/Planning_Education_in_and_After_Emergencies_EN.pdf

- Singh, M. (2009). Informal and non formal learning and frameworks in the development context [PowerPoint slides]. Retrieved from [http://www.etf.europa.eu/events/mgmt.nsf/\(getAttachment\)/FB1391CC32C7E2E8C125758B00392B61/\\$File/30%20Jan%2002%20Informal%20and%20non%20fomal%20learning%20\(UIL_ETF%20UNESCO\).pdf](http://www.etf.europa.eu/events/mgmt.nsf/(getAttachment)/FB1391CC32C7E2E8C125758B00392B61/$File/30%20Jan%2002%20Informal%20and%20non%20fomal%20learning%20(UIL_ETF%20UNESCO).pdf)
- Small and Medium Enterprises Development Authority. (n.d.). State of SMEs in Pakistan. Lahore: Small and Medium Enterprises Development Authority, Government of Pakistan. Retrieved from www.smeda.org.pk/main.php?id=34
- Soares, J. (2006). Women and ICT for open and distance learning: Some formal and non-formal approaches, experiences and strategies from the Caribbean. Paper presented at the *Sixth Pan-Commonwealth Forum (PCF6) on Open Learning*, 26–28 November 2010, Kochi, India. Retrieved from <http://pcf4.dec.uwi.edu/viewpaper.php?id=397&print=1>
- Sohdi, R. (2008). Microsoft Project Vikas: Tailoring solutions for SME clusters. *ICT4D*, 6(9). Retrieved from <http://www.i4donline.net/September08/September08.pdf>
- Spaven, P. (2009). Evaluation of the Commonwealth of Learning 2006–2009 Plan: Final report, March, 2009. Vancouver, Canada: The Commonwealth of Learning. Retrieved from http://www.col.org/PublicationDocuments/External%20Evaluation_0609.pdf
- Speirs, K. (2008). Lifelong Learning for Farmers. *Commonwealth Quarterly*, 6 March 2008. Retrieved from <http://www.thecommonwealth.org/EZInformation/176131/060803life>
- Spronk, B. (1999). Non formal education at a distance: A framework for discussion. Paper prepared for a round table discussion at the *1st Pan Commonwealth Forum on Open Learning*, 1–5 March 1999, Bandar Seri Begawan, Brunei Darussalam. Retrieved from www.col.org/forum/pcfpapers/spronk.pdf
- Subramanian, R., & Arivanandan, M. (2009). Rural development through village knowledge centers in India. *Communications of the IIMA*, 9(2), 101–120. Retrieved from http://www.iima.org/index.php?option=com_phocadownload&view=category&download=130%3Arural-development-through-village-knowledge-centers-in-india&id=27%3A2009-volume-9-issue-2&Itemid=68
- Sudaryanto. (2011). The need for ICT education for managers or agri-businessmen for increasing farm income: Study of factor influences on computer adoption in East Java farm agribusiness. *International Journal of Education and Development using Information and Communication Technology*, 7(1), 56–67. Retrieved from ijedict.dec.uwi.edu/viewarticle.php?id=1219
- Sulaiman, R. V., Kalaivani, N. J., Mittal N., & Ramasundaram, P. (2011). *ICTs and empowerment of Indian rural women: What can we learn from on-going initiatives?* CRISP Working Paper 2011-001. Hyderabad, India: Centre for Research on Innovation and Science Policy. Retrieved from www.crispindia.org/docs/CRISP%20Working%20Paper-ICTs%20and%20Empowerment%20of%20Women.pdf
- Taifi, N. (2006). Tacit knowledge and the knowledge management systems. *Knowledge Management Review*. Retrieved from knowledgemanagement-review.blogspot.com/2010/04/tacit-knowledge-management.html
- telecentre.org (2012). Global telecentre map. Retrieved from <http://global-maps.telecentre.org/add>
- Thamizoli, P., Francis, H., Soundari, H., Kamaraj, K., & Balasubramanian, K. (2011). *Learning for farming initiative: Longitudinal study tracing the Lifelong Learning for Farmers activities in Tamil Nadu, India 2011*. Vancouver, Canada: Commonwealth of Learning.
- Thuriaux, M. C. (2011). Infant mortality rate. In *Enotes*. Retrieved from www.enotes.com/public-health-encyclopedia/infant-mortality-rate

- Torres, R. M. (2009). *From literacy to lifelong learning: Trends, issues and challenges in youth and adult education in Latin America and the Caribbean. Regional Synthesis Report*. Hamburg, Germany: UNESCO Institute for Lifelong Learning. Retrieved from http://www.unesco.org/fileadmin/MULTIMEDIA/INSTITUTES/UIIL/confintea/pdf/GRALE/confinteavi_grale_lac_synthesis_en.pdf
- Tostan. (2010). Abandoning female genital cutting (FGC). Dakar-Yoff, Senegal: Tostan. Retrieved from www.tostan.org/web/page/586/sectionid/547/pagelevel/3/interior.asp
- Trucano, M. (2010). Learning the Queens' English . . . on your mobile phone? In *World Bank blog on ICT use in education*. Retrieved from blogs.worldbank.org/edutech/learning-the-queens-english-on-your-mobile-phone
- Tuckey, J. (2003, July). Education by radio in Somalia. *The Somaliland Times*, 79. Retrieved from www.somalilandtimes.net/2003/79/7907.shtml
- Ulbricht, M. (2011, May 14). Animation without borders: Mobile cartoons as a teaching tool. In *MobileActive.org* (Case studies). Retrieved from www.mobileactive.org/case-studies/animation-without-borders
- UNESCO. (n.d.). *Education for all*. Paris: UNESCO. Retrieved from www.unesco.org/education/efa/ed_for_all
- UNESCO. (1997, November). *International standard classification of education I S C E D 1997*. Paris: UNESCO. Retrieved from http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm
- UNESCO. (2006). Non-formal education. In *Guidebook for planning education in emergencies and reconstruction* (pp. 1-16). Paris: International Institute for Educational Planning, UNESCO. Retrieved from http://www.iiep.unesco.org/fileadmin/user_upload/Research_Highlights_Emergencies/Chapter12.pdf
- UNESCO. (2011). *The hidden crisis: Armed conflict and education*. Paris: UNESCO. Retrieved from unesdoc.unesco.org/images/0019/001911/191186e.pdf
- UNESCO Bangkok. (2005). *Information and communications technologies (ICTs) for community empowerment through non-formal education: Experiences from Lao PDR, Sri Lanka, Thailand and Uzbekistan*. Bangkok: UNESCO Bangkok. Retrieved from unesdoc.unesco.org/images/0013/001395/139568eb.pdf
- UNICEF. (n.d.). The use of emergency education and recreational kits in Aceh: A review. In *UNICEF* (East Asia and Pacific). Retrieved from www.unicef.org/eapro/SIB_Use_of_emer_edu_Aceh.pdf
- United Nations. (2010). *Summit on the millennium development goals*. 20-22 September 2010. New York: United Nations. Retrieved from www.un.org/millenniumgoals
- United Nations/UNICEF. (1996). *Impact of armed conflict on children*. Retrieved from www.unicef.org/graca/a51-306_en.pdf
- USAID. (2005). MTV inspires radio AIDS education. Retrieved from http://africastories.usaid.gov/search_details.cfm?storyID=399&countryID=21§orID=0&yearID=5
- USAID Philippines. (2011). *Workforce development*. Metro Manila: USAID Philippines. Retrieved from philippines.usaid.gov/programs/education/livelihood-skills-training
- Valk, J-H., Rashid, A. T., & Elder, L. (2010). Using mobile phones to improve educational outcomes: An analysis of evidence from Asia. *International Review of Research in Open and Distance Learning*, 11(1). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/794/1487>

- Verdiani, A. (Ed.). (2005). *Inter-agency peace education programme skills for constructive living: Overview of the programme*. Paris: UNESCO, Inter-Agency Network for Education in Emergencies. Retrieved from unesdoc.unesco.org/images/0014/001442/144251e.pdf
- Vermaak, D. (1985). Education and development: The role of non-formal education, especially in developing countries. *Development Southern Africa*, 2(3), 411–421.
- WAND. (2009). The Women and Development Unit. Consortium teleconference, 30 June 2009. The University of the West Indies Open Campus. Retrieved from www.cavehill.uwi.edu/BNCCde/WAND.doc
- Ward, D. (2010). *Revised manual for the programming stages of AFRI Participatory Radio Campaign Number Two*. Ottawa: Farm Radio International. Retrieved from www.farmradio.org/english/partners/afri/prc-manual-eng.pdf
- Wauters, R. (2010, February 1). Nokia, Pearson set up digital education joint venture in China. *TechCrunch*. Retrieved from techcrunch.com/2010/02/01/nokia-pearson-mobileedu/
- WHO. (2010). *World health statistics 2010*. Geneva: World Health Organization Press. Retrieved from www.who.int/whosis/whostat/EN_WHS10_Full.pdf
- WHO. (2011). *mHealth: New horizons for health through mobile technologies. Based on the findings of the second global survey on eHealth*. Global Observatory for eHealth series – Volume 3. Geneva: World Health Organization Press. Retrieved from www.who.int/goe/publications/goe_mhealth_web.pdf
- Wisconsin Department of Public Instruction. (2008). *Community education principles*. Madison, WI: Wisconsin Department of Public Instruction. Retrieved from dpi.state.wi.us/fscp/ceprin.html
- World Bank. (2007). *World development report*. Washington, DC: World Bank.
- World Bank. (2011). Same language subtitling on TV for mass literacy. *Development Marketplace*. Retrieved from <http://wbi.worldbank.org/developmentmarketplace/idea/same-language-subtitling-tv-mass-literacy>
- World Movement for Democracy. (n.d.). *Civic education/participation*. Washington, DC: World Movement for Democracy. Retrieved from www.wmd.org/resources/whats-being-done/peace-building-democracy/civic-education/participation
- Yates, D. (2011, February 28). Team delivers development aid via cell phone animations. Champaign, IL: University of Illinois News Bureau. Retrieved from http://news.illinois.edu/news/11/0228phone_ed_Bello-Bravo_Pittendrigh.html
- Yeager Sallah, J. A. (2006, February 6). *Community Youth Peace Education Program (CYPEP) mid-term evaluation final report*. Liberia Transition Initiative. USAID/Office of Transition Initiatives (OTI) Implemented by Creative Associates International Inc. (CAII). Retrieved from http://pdf.usaid.gov/pdf_docs/PDACG877.pdf
- Youth Development Network. (2004). *Exploring the integration of entrepreneurship education in formal and non-formal curricula*. Marshall Town, South Africa: Youth Development Network. Retrieved from www.ydn.org.za/publications/yes/Entrepreneurship%20Education%20Book06.pdf

About the author

Colin Latchem is a former Head of the Teaching Learning Group at Curtin University, Perth, Western Australia, and National President of the Open and Distance Learning Association of Australia. He now consults, researches, writes, and speaks at conferences on issues relating to leading and managing open and distance education. He is the Asia-Pacific Corresponding Editor of the *British Journal of Educational Technology* and an editorial board member of several other leading international journals. He has authored many books, chapters and journal articles. His most recent book is *Quality Assurance and Accreditation in Distance Education and e-learning* (Routledge Open Learning Series).

This Quality Assurance (QA) toolkit will be a useful resource for non-formal education and training (NFE) policy makers, programme managers, in-field staff and researchers working through governmental, non-governmental and community-based organisations, development assistance agencies and funding bodies.

NFE is an extremely wide field, encompassing themes with an enormous and ever-increasing need, including adult literacy, basic education for out-of-school children, life skills, work skills, gender equity and community development. Evidence of direct and tangible benefits to individuals, communities and economies must be demonstrated if these programmes are to receive the funding and support that they need.

QA systems applied in educational contexts are generally concerned with inputs — how much money is spent, what staffing, resources and support are provided, what kinds of teaching and learning are involved, and so on. There is an assumption — not always fulfilled — that the higher the standards of the inputs, the higher the quality of the outputs. In this toolkit, we propose a different approach: the evaluation of the programmes' outcomes, outputs and impacts. We:

- Examine the differences between informal and self-directed learning, NFE and formal education.
- Provide examples of NFE programmes using a variety of face-to-face, distance education and technology-based teaching and learning methods.
- Examine the approaches to QA that are required in NFE.
- Consider the outputs, outcomes and impacts that can be achieved in NFE programmes.
- Propose the adoption of a rigorous but simple-to-use QA framework which is based on outputs, outcomes and impacts.

PRINTED IN CANADA

Printed according to environmentally progressive print practices, using chlorine-free, recycled fibres. FSC certified. Electricity used in manufacturing the paper stock has been offset by Green-e renewable energy certificates.

