Blended Learning in the Development Context

Experience with GDLN in Asia-Pacific

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Table of Contents

Abbreviations and Acronyms

Introduction

Acknowledgments

Part One

Paper 1: Acquiring Knowledge for Development Goes Beyond Traditional Training
Paper 2: Benefits of Using ICT in Learning for Development

Part Two

Paper 3: Blended Learning in the GDLN Context
Paper 4: Three Major Blended Delivery Modalities Used in GDLN Asia-Pacific
Paper 5: GDLN Learning Programs in Asia-Pacific
Paper 6: Delivery of Blended Learning Programs by the GDLN

Part Three

Paper 7: Learning Theories and Applications in GDLN Program Design
Paper 8: Important Design Decisions
Paper 9: A Three-Stage Process for Designing a Blended Learning Program

References
# Abbreviations and Acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDS</td>
<td>acquired immunodeficiency syndrome</td>
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<tr>
<td>AIM</td>
<td>Asian Institute of Management</td>
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<td>AMS</td>
<td>Activity Management System</td>
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<td>APO</td>
<td>Asian Productivity Organization</td>
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<td>ASEAN</td>
<td>Association of South East Asian Nations</td>
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<td>CBT</td>
<td>computer-based training</td>
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<tr>
<td>CD-ROM</td>
<td>Compact Disk-Read Only Memory</td>
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<tr>
<td>CMS</td>
<td>course management system</td>
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<td>CoP</td>
<td>community of practice</td>
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<td>CRTVU</td>
<td>China Central Radio and TV University</td>
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<td>DLC</td>
<td>development learning center</td>
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<tr>
<td>DVD</td>
<td>digital video disc</td>
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<tr>
<td>EAP</td>
<td>East Asia and Pacific</td>
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<tr>
<td>EDI</td>
<td>Economic Development Institute</td>
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<tr>
<td>F2F</td>
<td>face-to-face</td>
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<td>GEM</td>
<td>GDLN Event Management</td>
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<td>GDLN</td>
<td>Global Development Learning Network</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>IBT</td>
<td>Internet-based training</td>
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<td>ICT</td>
<td>information and communication technology</td>
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<td>JBIC</td>
<td>Japan Bank for International Cooperation</td>
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<td>JICA</td>
<td>Japan International Cooperation Agency</td>
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<tr>
<td>LMS</td>
<td>learning management system</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<td>MFDL</td>
<td>Microfinance Distance Learning</td>
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<td>MFToT</td>
<td>Microfinance Training of Trainers</td>
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<tr>
<td>NGO</td>
<td>nongovernmental organization</td>
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<td>OST</td>
<td>Open Space Technology</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<td>---------</td>
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<tr>
<td>SARS</td>
<td>severe acute respiratory syndrome</td>
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<td>TDLC</td>
<td>Tokyo Development Learning Center</td>
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<td>TQM</td>
<td>Total Quality Management</td>
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<td>TTL</td>
<td>task team leader</td>
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<td>TVUs</td>
<td>TV universities</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<td>VC</td>
<td>videoconference</td>
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<tr>
<td>WBT</td>
<td>Web-based training</td>
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<td>WTO</td>
<td>World Trade Organization</td>
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Sustainable development depends on individual and collective capacity to understand development challenges and to find effective solutions. Knowledge, not capital, is the key to sustained economic growth and improvements in human well-being, and a lack of knowledge is what often separates rich countries from poor ones. (World Bank 1999) Knowledge sharing and learning are key elements in bringing about sustainable development. One of the big challenges of the 21st century is to use information and communication technology (ICT) to enable more people to participate in learning activities so that they can move the world closer to achievement of the Millennium Development Goals.

Blended learning is defined as the use of a mix of distance learning technologies to bring about optimal learning outcomes. Development professionals and practitioners in the East Asia and Pacific (EAP) region are increasingly demanding blended learning programs and activities using the Global Development Learning Network (GDLN). This resource booklet titled “Blended Learning in the Development Context: Experience with GDLN in Asia-Pacific” has been produced in response to this demand.

The GDLN is a global partnership of GDLN affiliates and development learning centers (DLCs) that offer the use of advanced ICT to connect people working in the field of development. It was created and launched by the World Bank in 2000. After seven years of expansion, today more than 120 GDLN affiliates are in 80 countries worldwide. Affiliates in the EAP region and other regions have formed regional GDLN associations. Together with their partners, GDLN affiliates and DLCs offer their services to a diverse set of clients who share one common goal: improving the effectiveness of development around the world through learning.

What Is This Resource Booklet?

The resource booklet is a collection of just-in-time learning aids. It is organized as a series of short papers, each dealing with one particular aspect of blended learning in a development context. Each has a special refer-
Blended Learning in the Development Context: Experience with GDLN in Asia-Pacific

ence to using GDLN, while being linked—as a whole—in a logical sequence.

This edition of the booklet has nine short papers that cover mainly the basic concepts and terminologies, plus program design and implementation. Real program design and implementation situations are illustrated by cases. The resource booklet is designed to be flexible so that more papers can easily be added. Other papers will be included as new and innovative GDLN experiences arise.

Who Can Benefit from Using the Resource Booklet?

The resource booklet is designed to provide guidance and support for staff members of the GDLN affiliates and of DLCs, as well as their partners and clients around the region. It can help readers understand various GDLN programs from the perspectives of ICT use and pedagogy. It can also be valuable for those professionals who design and implement blended learning programs for a variety of audiences.

How Can the Resource Booklet Be Used Effectively?

Each short paper in the booklet covers a specific topic. The booklet has three parts. Papers in the first part take the reader through discussions on learning and the challenges of development, the role of information and knowledge in development, the pressure to scale up, and the benefits of using ICT. Those papers further address the limitations of a traditional training approach in enabling large numbers of people to effectively acquire information and speed the development process.

Papers in the second part examine blended learning and describe how ICT can best be used in blended learning activities in the context of GDLN. They provide examples of blends used around the world in response to development challenges. The papers also describe how a blended learning program is delivered through the GDLN to multiple sites, as well as the roles and responsibilities of all major players, including the program provider, the DLCs, and the local facilitators. Innovative uses of the GDLN are illustrated by real-life cases.

Papers in the third part describe techniques and procedures used in designing blended learning programs for GDLN. They describe the design of blended learning programs as a decision-making process on several important issues and suggest a three-stage process that is based on the authors’ practical experience. They also emphasize the importance of implementation and communication in program design.

Some papers, such as papers 1 through 4, should be reviewed by every reader who is interested in blended learning in the GDLN. Other papers may be more specific to particular readers. For example, papers 5 and 6 are more relevant to DLC staff members, and papers 7 through 9 are more useful for GDLN program designers.

Any of the papers can be selected and reproduced as blended learning workshop training material. The usefulness of such papers for this purpose was confirmed in November 2006 in the Indonesia workshop on Designing and Implementing Blended Learning Using GDLN and in the GDLN Asia and Pacific Region DLC training program.
Acknowledgments

The authors thank the Tokyo Development Learning Center for its support of this work, especially for the advice and comments from Ryu Fukui, Colin Lonergan, and Ravi Corea. Thanks also go to GDLN colleagues at the World Bank Institute for their suggestions and their experience with blended learning. Those helpful individuals are Han Fraeters, Michael Foley, Alexandra Klopfer, Sohba Kumar, Sheila Jagannathan, Atem Ramsundersingh, Patrick Tse, and Monika Weber-Fahr. Participants of the Indonesia GDLN Blended Learning Workshop gave a good evaluation and much encouragement concerning the six papers they used as learning material. Our special thanks go to Publications Professionals LLC for editing and formatting.
The Challenge of Development

Our world is out of balance. Of the six billion people now on earth, one billion hold 80 percent of the income, the other five billion share less than 20 percent of it. In the next 20 years, two billion people will be born—all but 50 million of them in developing countries. By 2025, seven billion out of eight billion people will live in developing countries; in 2050, the split will be eight billion out of nine billion. And poverty, inadequately addressed, will grow along the same lines.

—James D. Wolfensohn in Morena-Dodson 2005: Foreword, vii

The Millennium Development Goals

The numbers of people still in poverty are a reminder of the massive scale and importance of the worldwide development task. Broad development challenges have been clearly defined in the United Nations (UN) Millennium Development Goals (MDGs) formulated after the UN Millennium Declaration in 2001. The now familiar eight goals to be achieved by 2015 include the following:

1. To eradicate extreme poverty and hunger
2. To achieve universal primary education
3. To promote gender equality and empower women
4. To reduce child mortality
5. To improve mental health
6. To combat HIV/AIDS, malaria, and other diseases
7. To ensure environmental sustainability
8. To establish a global partnership for development

What makes achievement of the MDGs a major challenge is the daunting scope of the task, especially given a still-growing world population; the number of poor who live on the equivalent of less than US$1 or US$2 per day; the number of children who do not attend school; and the
mortality rate of young children and childbearing women associated with malnutrition, disease, and poor medical services. It is not difficult to imagine how planning, managing, and implementing the myriad specific activities and tasks associated with the achievement of each of the eight goals adds to the complexity of bringing about development. Hence, the challenges of development are formidable.

The development challenge is further complicated by unforeseen and often unpredictable occurrences, such as the H5N1 virus associated with avian flu, which could trigger a human flu pandemic; severe acute respiratory syndrome (SARS); the physical and social damage as a result of the tsunami of 2004; the continuing spread and prevalence of HIV/AIDS; civil strife; earthquakes; and frequently occurring large-scale floods and droughts associated with environmental degradation and global warming.

The pressure to scale up

An ever-present question concerning development is how to accelerate the process. Accelerating development usually requires reaching large numbers of people in local, national, regional, and international space as quickly and effectively as possible to share development goals, to encourage and reinforce a learning process that leads to finding solutions to development challenges, and to firm up commitment to moving forward. It means scaling up the numbers of people reached so that successful development outcomes can be multiplied.

Training has traditionally been the solution of choice in enhancing information flow, enabling the acquisition of knowledge, and upgrading skills as a contribution to meeting the challenge of scaling up for development. Typically, training programs are offered face to face in classroom-type settings, where maximum numbers of participants are dictated by topic, budget, and space available. As noted by Driscoll (1998), traditional training programs of good quality are geographically bound. If there is a need to train more people, the program must be repeated again and again at considerable cost per session and with limited throughput of participants. The pressure to scale up means that there has been—and continues to be—a high demand to train a growing number of people. Given the numbers associated with the MDGs and with other unforeseen development problems, the urgent challenge is to find ways to scale up development learning.

The innovative use of information and communication technology (ICT) and an emphasis on learning that places the focus on an actively involved learner will offer the best hope for successful scaling up. However, it must be recognized that learning to hasten development depends on factors outside and beyond the learning activity, such as policy frameworks that support development, service delivery, human resource capacity, and allocation of resources to the achievement of development goals.

The Role of Information and Knowledge in Development

Developing countries must make an information adjustment “or suffer exclusion from the global economy and severe disadvantage in the competitiveness of their goods and services.” They are threatened with a new and dangerous form of information poverty that could further widen the gap in economic status and competitiveness.

—Talero and Gaudette 1995: 9

Critical nature of information and knowledge

Money alone cannot solve the challenge of alleviating poverty. Knowledge, not capital,
the key to sustained economic growth and to improvements in human well-being, and a lack of knowledge is often what separates rich countries from poor ones. In addition to physical capital and human skill, economies are built on a foundation of information, learning, and adaptation (World Bank 1998). According to the same report, knowledge gaps occur when technical knowledge and basic know-how are unequally distributed across and within countries, whereas information problems occur when knowledge about attributes such as the quality of a product, the diligence of a worker, or the creditworthiness of a firm—all important to effective markets—is lacking.

Knowledge and information are critical elements in achieving development. The World Development Report 1998/99 notes how knowledge permeates all aspects of societies and affects economic growth and well-being. A lack of knowledge is often what separates rich and poor countries. Much new technological knowledge is generated in the richer countries, which can invest in research and development. But, the report points out, developing countries need not “reinvent the wheel or the computer or the treatment for malaria.” Poorer countries have the option of acquiring and adapting knowledge available in the richer countries. A big challenge in developing countries is to enhance the capacity of individuals and organizations to enable them to rapidly access and learn from knowledge generated by the development process. The report also points out that valuable knowledge is available in poorer nations. That knowledge also must be tapped in addition to using imported knowledge. Knowledge, however, cannot be acquired without an enabling environment that has the policies and infrastructure (including education) to absorb and use it effectively.

But acquiring knowledge is not without its challenges. “Countries cannot access new technology unless they also invest in education. New technology spurs demand for education and makes it easier to obtain knowledge. Thus, effective policies for acquiring, absorbing, and communicating knowledge are mutually reinforcing components of an overall strategy for narrowing knowledge gaps” (World Bank 1998: 25).

The need to go beyond traditional training

Development programs and projects have always been concerned with the transfer of technology, knowledge, and skills to targeted clients and to the wider international development community. The World Bank has been involved in this capacity for more than 50 years, beginning with the establishment of the Economic Development Institute (EDI) as the institutional training arm with a focus on client training.

EDI’s traditional approach was to offer training programs in a variety of forms and at many levels, mostly to public sector staff members and project or program beneficiaries. Training approaches included classroom presentations, field visits, seminars and workshops, and case studies. Training was based on the needs assessed by the provider or on the perceived needs of the trainees. The program was designed to meet the agreed-upon training goals or objectives, and the content, sequencing, timing, cost, and evaluation were included in the design. Training offered by qualified instructors to well-selected and motivated participants can be very effective, depending on the topic or subject matter, the goals, and the time and budget available.

However, the traditional training approach has obvious limitations and cannot fully meet today’s development challenges. To be effective, training must restrict the numbers per group in order to guarantee quality commu-
cation between the instructor and trainees. Often, because training takes place at a fixed location, instructors and trainees have to travel to that site and remain in paid accommodations for the duration of the event. The costs associated with such a model can be high. Throughput of trainees has always been an issue because of the numbers who need training and the limitations of time, space, and resources available.

In addition, there are other factors that impact the effectiveness of conventional training activities. Most trainees who work in the development arena are employed on a full-time basis and have to make a special effort to take and to be given time off for training, which can lead to the failure of individuals and groups to upgrade their knowledge and skills at the appropriate time. Trainee selection is not necessarily based on identified needs, and it often excludes those who could benefit most from participation in training activities.

In recognition of the important role played by information and knowledge for development and the limitations of traditional training, the development community, including the World Bank, has made tremendous progress in learning and knowledge-sharing practice. In 1998, the World Bank Institute (the new name of the restructured EDI) first introduced distance learning by using two-way interactive videoconferencing under the World Bank Learning Network. In 2000, the GDLN was officially launched as one of the World Bank’s innovative knowledge initiatives to transform traditional development training practice into a new paradigm of network learning enabled by technology and partnership.

Lessons learned show that global knowledge for development will have little effect on development problem-solving unless people adapt that knowledge to fit their local situations. Local experts and specialists must be involved in knowledge adaptation and application. Indigenous knowledge in developing countries has equal importance and value for development, so it must be tapped. For difficult and complicated development issues, many times there is no simple or existing “one-size-fits-all” answer, so people need to learn how to collectively search for solutions. As Qualters (2006) notes, learning is through interaction, discussion, critical questioning, and challenging of assumptions.

These new ways of thinking about dissemination, acquisition, and application of development knowledge have had an influence on training and learning. In addition to traditional training, in which information and knowledge are disseminated from experts and answers to problems are taught by instructors, there has been growing interest in encouraging knowledge sharing as a different and effective means of helping development professionals and practitioners. In that process, participants learn from each other and share successful and unsuccessful stories of their development practice. The influence of group interaction in bringing about learning through knowledge sharing is quite powerful. “Something magical and synergistic begins to happen when we engage in learning with each other” (Allee 1997: 90).

**A Matrix of Types of Learning Processes**

Learners no longer rely on a single source of information and knowledge. The learning process has evolved to a point where learners are sharing, exploring, and seeking information and knowledge from multiple and diverse sources. Figure 1.1 displays a matrix of types of learning processes. It uses two variables to identify major features of a learning process. One variable is the source of information and knowledge: whether it is from a single source.
or multiple sources. Another variable is the approach by which information and knowledge are acquired by the learner: whether it is from knowledge dissemination or from exploration. The combination of the two values of each variable gives rise to a matrix of four cells. Each cell represents a type of learning process, which has implications for learning design and implementation strategies.

**Figure 1.1. Matrix of Types of Learning Processes**

<table>
<thead>
<tr>
<th>Approach for Information and Knowledge</th>
<th>Source of Information and Knowledge</th>
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<tr>
<td>E-S: Individual reflection and internalization</td>
<td>Single</td>
</tr>
<tr>
<td>E-M: Collective exploration of knowledge and seeking of truth and solutions</td>
<td>Multiple</td>
</tr>
<tr>
<td>D-S: Knowledge dissemination and transfer from single source</td>
<td>Examples of GDLN program:</td>
</tr>
<tr>
<td>D-M: Knowledge sharing among multiple sources</td>
<td>• Public consultation using Web site or Open Space Technology</td>
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<td></td>
<td>• Applied research on development issues</td>
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<td></td>
<td>• Dialogue</td>
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<td></td>
<td>• Collaborative work</td>
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This process is necessary in all programs in order to make learning actually happen.

Examples of GDLN program:

- Structured course, seminar, workshop
- Outreach, announcement, conference
- Web site, publications
- Public Information Center

Examples of GDLN program:

- Global/regional dialogue
- Knowledge-sharing activities
- Community of practice
- Development discussion forum

**Knowledge dissemination and transfer from a single source**

The **D-S** cell in figure 1.1 describes the traditional training and learning approach. Information and knowledge are disseminated and transferred to participants by an authority or expert, normally represented by the instructor in the classroom or the keynote speaker at a meeting or conference.

Transfer of knowledge and skills to clients and to the wider international development community has always been part of the World Bank’s role, but supporting distance learning using ICT and learning with a partnership network is relatively new. The GDLN structured courses, seminars, and workshops mainly use this type of learning process. The established principles and design for good classroom teaching are still valid and useful. However, modifications are needed to incorporate the use of technology and to manage multiple sites at a distance. The knowledge management Web site, various publications on development, and the World Bank Public Information Center also fall into the **D-S** cell.

**Knowledge sharing among multiple sources**

The **D-M** cell represents a growing new type of learning process. Examples include GDLN global and regional dialogue and other knowledge-sharing activities, some of which can be classified as being in the community of practice format.² The e-development discussion forum is also a powerful tool for ongoing knowledge sharing.
As discussed, development challenges demand innovative learning and knowledge sharing by bringing together multiple sources of information and knowledge. Local professionals and practitioners who are experts in indigenous knowledge know best how to adapt global knowledge to local environments and circumstances, which often have their own political and tribal dynamics. In a knowledge-sharing event, participants learn from peers, especially from those in other developing countries who are facing similar problems. They make their own judgments about what is relevant and useful for them. The instructor is replaced by a facilitator or moderator. A knowledgeable moderator who keeps the communication flowing and, at the same time, clarifies and summarizes key points is important in facilitating the knowledge-sharing process.

Collective exploration of knowledge and seeking of truth and solutions

The $E-M$ cell characterizes the learning process of exploring knowledge and seeking truth and solutions collectively. Often there is no right and simple answer to complicated problems or unexpected events and disasters. The learning process seeks (a) to collect information and generate knowledge to solve problems or (b) to make meaning through comprehension and analysis so that consensus can be reached and action plans can be agreed on.

This type of learning process can sometimes appear chaotic. However, with good design and professional facilitation, the outcome of group processes can be extraordinary. The collective learning process has been used increasingly for development and can be organized in a face-to-face situation or through virtual participation, such as public consultation using a Web site or Open Space Technology (OST)\(^3\) (Owen 1997), applied research on development issues, or dialogue and collaborative work.

Individual reflection and internalization

The $E-S$ cell corresponds to the individual learning process of reflection and internalization. Learning can occur only when the learner internalizes new information and knowledge that he or she has received. Thus, the individual’s efforts to explore meaning and make sense of new information are essential to all learning processes classified in the other three cells.

In reality, a comprehensive learning event or program normally consists of more than one type of learning process. For example, a training seminar or workshop may have a knowledge-sharing component or at least may encourage participation and peer-to-peer learning. It may also allocate some time for group work so that participants can seek solutions to certain problems. Similarly, a knowledge-sharing event may have an information and knowledge dissemination component to provide common background information and theoretical framework for analysis.

Notes

1. The declaration, endorsed by 189 countries during the largest gathering of heads of state, is a roadmap documented with targeted development goals to be reached by 2015.
2. A community of practice (CoP) brings together individuals with a common interest—professional and technical, social, cultural, and more—to share information and experience, to seek advice, and to give guidance. Participation in a CoP is purely voluntary, and members are free to join and leave as they wish. CoPs can take place in various formats, such as face-to-face or virtual.
3. OST is a way to convene people for a conference, retreat, or meeting. Attendees are asked to generate the meeting agenda and participate by leading small group breakout sessions during the meeting. There is usually a facilitator, but no official meeting leader who demands compliance.
Benefits of Using ICT in Learning for Development

The term information and communication technology (ICT) has become part of everyday language and is synonymous with television, the Internet, e-mail, cell phones, CD-ROMs, DVDs, handheld personal devices, and an ever-growing array of new inventions. Those who work in academic institutions and development agencies and who are concerned about the challenges of development look to ICT for ways to help students, clients, and adults learn more effectively.

How ICT Helps Meet the Development Learning Challenge

A survey of firms carried out in 56 developing countries finds those that use ICT grow faster, invest more, and are more productive and profitable than those that do not. It translates into a high demand for investments and presents a tremendous opportunity for innovative public-private partnerships.


ICT has changed the way that people communicate, learn, and conduct business. It can help meet development learning challenges in many ways and has a critical role to play in development efforts around the world. However, “there was a time when the benefits of applying ICT in fighting poverty and promoting economic growth were not widely understood. Lately, however, this view has given way to an understanding of ICT as an essential component of broader efforts to harness the free flow of information to increase voice, accountability, and economic development” (World Bank 2006: xi).

Enabling information and knowledge to travel faster and farther

ICT is, and will continue to be, a catalyst in advancing economic growth and poverty reduction. New information and communication technologies overcome the barriers of distance and time. ICT has significantly improved the accessibility of information and knowledge by enabling them to travel faster and farther at an unprecedented low cost. As a result, it acts as a key element in achieving development goals.
and mitigating the impact of unforeseen events such as natural disasters or disease outbreaks. Distance education and learning using ICT also offer potential learning opportunities to those who were previously excluded.

Access to information and knowledge is critical to development learning. Generally speaking, ICT is suited to quickly reaching larger numbers of people across a wide geographic space. The ability of radio and television to reach into both urban concentrations and remote areas is unquestioned. The Internet is fast becoming the communication tool that is unrivaled for its power, speed, and ability to reach a vast number of users worldwide. Videoconferences that allow people to see each other and to exchange information and ideas in real time can also reach large numbers. The mobile phone is becoming commonplace and contributes greatly to information transmission among small businesses and entrepreneurs. E-mail is another widely used tool that allows large numbers of people to communicate directly, cheaply, and rapidly.

ICT choices are growing, but no single tool, medium, or combination thereof is necessarily the perfect solution for information sharing and learning related to development, because most learning situations have unique sets of people, problems, and variables. This resource booklet will examine the place of ICT in a mix or blend of learning enhancers and will describe new and emerging innovative uses of ICT for development activities.

**Supporting information and knowledge sharing on a large scale**

Knowledge sharing and learning are increasingly recognized as powerful contributors to the development process. The *World Development Report 1998/99* (World Bank 1999) notes how knowledge permeates all aspects of societies and affects economic growth and well-being. A lack of knowledge, it suggests, is often what separates rich and poor countries, and a big challenge in developing countries is enhancing the capacity of individuals and organizations to rapidly access and learn from knowledge generated by the development process. The classic training model that has been and continues to be widely used to transmit knowledge and information to trainees does not usually promote knowledge sharing and learning in the manner now considered more effective in contributing to the growth of individuals and communities.

As ICT continues to innovate and advance, its capacity to support interactivity grows, from one-way broadcasting to two-way interaction, from asynchronous (not real time) to synchronous (real time). The development and increasing availability of new and affordable ICT, such as e-mail, e-discussion tools, instant messaging, Internet protocol phones, and videoconferences (VCs), offers promise for widening the scope and scale of knowledge sharing and learning for development. Many practitioners seek guidance on how best to use these technologies in meeting their specific development learning challenges.

**Providing just-in-time information and knowledge**

Millions of students and trainees participate in education and training programs to acquire knowledge and skills that may have future applications. In the workplace and in everyday life, people seek specific knowledge and skills when and where they need them. ICT makes available and accessible just-in-time information and knowledge and provides opportunities for continued and lifelong learning.
Those who own or have access to computers and the Internet can access a wealth of information and learning resources, either by online searching or by using CD-ROMs or DVDs for self-paced learning. Well-developed and well-organized Web sites and various online publications, as well as powerful search engines, offer a tremendous amount of information and knowledge 24 hours a day.

Just-in-time learning means acquiring knowledge and skills as they are needed. It is driven by each learner’s need, and the content can be customized. It happens at the moment the learner is going to apply the knowledge and skill, so the learner is in an active and ready-to-learn mode. In the information age, people can learn just in time and just what they need. Thus, information and learning become more relevant to needs and can be immediately applied. Learning is more likely to take place when the learner needs information, knowledge, or skills to solve an immediate problem or to complete a task.

ICT offers the possibility of structuring and delivering learning resources and opportunities when learners need them: “Companies can use technology to create just-in-time learning and decision support systems that harness and disseminate the knowledge of the organization and help managers make better decisions while learning” (Wind and Reibstein 1999: 4).

**Bringing about revolutionary advances in distance learning**

Distance learning, in which learning takes place away from the place of instruction, has a long history. Correspondence courses, for instance, can be dated back to the middle of the 19th century. Radio has also been used effectively as an education medium in developing countries (Nwaerondu and Thompson 1987). In the 1950s and 1960s, the United Nations Educational, Scientific, and Cultural Organization sponsored a Farm Radio Forum modeled on a 1941 Canadian radio discussion program (Cayley 1986). The program successfully supported agricultural extension in developing countries. From the 1960s to 1980s, various analog technologies and satellite-based transmission systems brought about considerable growth in distance learning. Since the mid-1990s, the use and popularity of personal computers and related applications, especially digital technologies and the Internet, have continued to bring about revolutionary advancement and have reshaped the landscape for distance learning.

The vital benefit of distance learning is that it provides learning opportunities to those who would otherwise be excluded. One of the major strengths of ICT is its ability to reach out to and include learners and clients who are separated by geography or are prevented from participating in learning activities by infrastructure, time, or financial constraints. Because of its great accessibility and flexibility, distance learning using modern ICT has invigorated adult education and training as well as organizational training and learning.

**Significantly reducing learning costs**

Because of advances in ICT, the personal computer continues to become more accessible and affordable. The Internet and mobile phone are becoming commonplace for millions of people, including those in developing countries. The cost of videoconferencing is also lowered if Internet protocol is used to connect participating sites.

Through the use of ICT, training and learning can reach a large number of people at a low
marginal cost. The savings on travel and the economies of scale that are gained make learning more cost-effective. A real case from the Tokyo Learning Development Center, which compares two delivery modes for the same course—the Total Quality Management (TQM) course of the Asian Productivity Organization (APO)—illustrates the savings gained from the use of ICT. In the traditional face-to-face (F2F) seminar, the cost per participant is US$2,000, whereas in the blended learning version the cost drops to US$585 per participant—a savings of 70 percent over the traditional F2F model (see table in box 2.1).

<table>
<thead>
<tr>
<th>Box 2.1. Cost-Effectiveness of Distance Learning Using the Global Development Learning Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Asia Productivity Organization has delivered the Total Quality Management course to its member countries for years. In a typical scenario, 20 participants from approximately 5 to 10 member countries travel to Tokyo, where a five-day seminar is conducted. APO bears the total cost of the seminar, including participant airfare and accommodations, local transportation and learning materials, and honoraria for resource persons. The average cost of the F2F scenario could be as high as US$50,000 to US$90,000, depending on where in the region the participants live. In 2005, APO introduced discount economy airline tickets, which reduced the total course cost to US$40,000. This lower figure is used for comparison. In late 2004, the Tokyo Development Learning Center helped APO convert the TQM course to a blended distance learning model. Under the new model, 80 participants from five countries attend the seminar in their own capital city for four days. Resource people deliver their lectures and conduct question-and-answer sessions and discussions from Tokyo using videoconferencing. No air travel is involved for anybody. Five local facilitators are recruited, each of whom is hired in his or her country to organize and facilitate the class. Lunch and tea breaks plus local transportation are provided by the course organizer through local APO branches. The savings on costs of international travel and hotel accommodation are significant, especially because those expenditures normally account for more than 70 percent of the total cost of a traditional F2F seminar, according to historical data. The new cost items in the blended learning approach are fees for local facilitators and for use of videoconferencing facilities. On the basis of actual data, all expenses incurred in Tokyo and five participating countries, including honoraria for resource persons and local facilitators, training materials, local transportation, lunch and tea breaks, and so on, amounted to approximately US$10,000. In addition, the cost of setup and connection of videoconferencing sessions for three days was US$36,821. The total cost of the blended learning activity was US$46,821. To make an accurate comparison, the total cost is divided by the number of participants in each delivery mode to yield the cost per participant. In the traditional F2F scenario, the cost per participant is US$2,000, whereas in the blended learning model it is US$585 per person. The savings per person for the same course when delivered using ICT in a VC-based learning model is US$1,415, which represents a savings of 70 percent over the traditional F2F model (see the accompanying table).</td>
</tr>
</tbody>
</table>

(box 2.1 continued next page)
### Cost Comparison of F2F and Blended Distance Learning

<table>
<thead>
<tr>
<th>Cost items</th>
<th>F2F TQM seminar for 20 participants</th>
<th>VC-based blended learning on TQM for 80 participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major cost items</td>
<td>Resource person honorarium</td>
<td>Resource person honorarium</td>
</tr>
<tr>
<td></td>
<td>Learning materials</td>
<td>Learning materials</td>
</tr>
<tr>
<td></td>
<td>Participants’ airfare and accommodations</td>
<td>Participants’ lunch and tea breaks</td>
</tr>
<tr>
<td></td>
<td>Reception and tea breaks</td>
<td>Local transportation</td>
</tr>
<tr>
<td></td>
<td>Local transportation</td>
<td>Local facilitator’s fee</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Videoconferencing setup and connection</td>
</tr>
<tr>
<td>Total cost</td>
<td>US$40,000</td>
<td>US$46,821</td>
</tr>
<tr>
<td>Cost per participant</td>
<td>US$2,000</td>
<td>US$585</td>
</tr>
<tr>
<td>Savings per participant</td>
<td></td>
<td>US$1,415 (70% of traditional F2F cost)</td>
</tr>
</tbody>
</table>

*Source: TDLC 2005.*
**Blended Learning in the GDLN Context**

*Blended learning refers to an educational experience created cost-effectively using a mix of integrated distance learning technologies such as videoconferencing, e-learning, videos, and CD-ROM. Typically the blend will also include traditional face-to-face (F2F) classroom activities, print resources, and a variety of instructional strategies such as action learning, participatory learning, interactivity, case studies, and more.*

*GDLN Toolkit, http://www.gdln.org*

Rossett, Douglis, and Frazee (2003) report that adding a form of information and communication technology (ICT) to the blend gives superior results. They note that in 2002, Harvard Business School faculty members Brian J. Delacey and Dorothy A. Leonard reported that not only did students learn more when online sessions were added to traditional courses, but student interaction and satisfaction improved as well. NETg, a division of Thomson Learning, released a white paper (Thomson and NETg 2003) that reported speedier performance on real-world tasks by people who learned through a blended strategy as compared to people who studied through e-learning alone.

**Distance Learning, E-Learning, and Blended Learning**

*Distance learning is an umbrella term encompassing all learning that takes place at locations remote from the point of instruction. Distance learning may take the form of an instructor-led course delivered through satellite to multiple remote locations. For example, a course originating in Washington, D.C., at the Global Development Learning Network (GDLN) hub and attended by participants in six Asian countries, or a course originating in a GDLN development learning center (DLC) and attended by participants at DLCs in four provinces of a particular country. Distance learning may also refer to training applications delivered through computer networks to participants or students at any network node. Web-based training is a distance learning method in which the training application resides on a*
Figure 3.1. Spectrum of Delivery Modes

<table>
<thead>
<tr>
<th>One place, same time</th>
<th>Multiple places, same time and different time</th>
<th>Anywhere, anytime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-face classroom teaching</td>
<td>Distance learning</td>
<td>Pure e-learning</td>
</tr>
<tr>
<td>Blended learning</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors’ representation.

Web server and participants or students may take the training from any location that can access the server.

E-learning is also an umbrella term that covers all learning that takes place using electronic means, such as the computer, and that uses the Internet or storage devices such as CD-ROMS, DVDs, or multimedia. E-learning facilitates and enhances both formal and informal learning and knowledge sharing at any time, at any place, and at any pace and is considered a current and important form of distance learning.

The term e-learning covers computer-based training (CBT), Web-based training (WBT), and Internet-based training (IBT), which all describe the learning mode according to the technology used. CBT predates WBT and has itself migrated to IBT.

Blended learning has become increasingly important and is closely related to distance learning and e-learning. Although e-learning offers the attractive advantages of accessibility, flexibility, and cost savings, people miss direct human contact—especially the physical F2F interaction—in the learning process. Putting learning materials online doesn’t make learning happen automatically. Creating good e-learning courses and developing relevant learning skills and culture is a challenge. Indeed, many people and organizations returned to the F2F mode after experiencing frustrations with e-learning.

The basic feature of a blend is that several ingredients are mixed together to give the desired result. Blended learning is not different; it is a mix of appropriate delivery techniques and technologies to enhance the ability of the learner to learn and to achieve the desired outcome of the learning experience. Many definitions of blended learning exist, but the core idea remains constant. Blending is the means toward an end, which is to have the learner learn effectively.

One approach to blended learning is to combine the F2F mode with e-learning. Another possibility is to blend ICT-based modes into F2F classroom learning (Mantyla 2001). A broader definition of blended learning refers to the optimal mix of different delivery technologies or modes (see the quotation from GDLN Toolkit at the beginning of this paper). The GDLN takes this approach to blending, which can include F2F classroom teaching (one place at the same time), teaching that occurs multiple places at the same time or at different times in different time zones, and pure e-learning, which can take place anywhere and at any time.

If the traditional F2F classroom teaching fits at one end of the spectrum of the learning delivery mode, then pure e-learning fits at the other end. Figure 3.1 reflects the spectrum of
delivery modes in terms of time and space, and illustrates the relationship among distance learning, e-learning, and blended learning.

**Synchronous, Asynchronous, and Interactivity of Technologies**

When discussing distance learning technology, one must understand the terms *synchronous* and *asynchronous*.

*Synchronous* means that the teaching and learning activities are happening at the same time. In other words, synchronous learning is happening in real time. In a traditional classroom, for example, a teacher delivers a mathematics lesson to a class of pupils. The interaction is taking place in real time. To simulate the classroom situation in distance learning, the technology should be synchronous. A videoconference (VC) is one example of synchronous communication technology. Despite being in different time zones, all participants are connected to the VC at the same time and communicate in real time. Two other examples of synchronous communication are Internet chats and online instant messages.

*Asynchronous*, the antonym of *synchronous*, indicates that the interaction is not live or in real time. A message is sent out at one time, and a response is given later. Postal mail, e-mail, and online discussion forums are all examples of asynchronous communication.

*Interactivity* is another important feature of communication technology. It is described as one-way or two-way communication. One cannot ask a question or respond to an opinion in the case of radio or television broadcasting, because they are forms of one-way technology, especially when the broadcasts are prerecorded. But by integrating telephone and e-mail with live audio or TV broadcasting, two-way communication can be achieved. Videoconferencing is a two-way communication technology. GDLN’s VC facility has two-way audio and two-way video capacity, so that every center can be both a receiving site and a delivering site. Other VC equipment that is available on the market at a much lower cost is designed to have one-way video and two-way audio. The center that sends out a video signal is the delivering site, and the other centers are receiving sites.

**Definitions of Educational Media and Technology**

The rapid development of ICT has given rise to a lexicon of terms that are commonly used by practitioners but sometimes not fully understood by users. It is important that those who request and those who design blended learning activities be familiar with the more commonly used ICT terms.

So far, the terms *media* and *technology* have been used without being clearly defined. Bates and Poole (2003) argue that, to achieve effective teaching in education, it is important and necessary to differentiate and define media and technology. According to them, “technologies are physical things. Of themselves, they do not communicate. Media, however, are means of communication. They require a source of information, a means of transmitting information (including symbol systems), and a receiver, that is, someone who is interested in, has access to, and knows how to interpret the communication” (Bates and Poole 2003: 48).

Bates and Poole (2003) defined five primary educational media, which represent different clusters of symbol systems, or ways of mediating and interpreting knowledge:

- Direct face-to-face contact
- Analog audio
Table 3.1. Educational Media and Technology

<table>
<thead>
<tr>
<th>Media</th>
<th>Technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One-way broadcast</td>
</tr>
<tr>
<td></td>
<td>Synchronous Asynchronous</td>
</tr>
<tr>
<td></td>
<td>Two-way communication</td>
</tr>
<tr>
<td></td>
<td>Synchronous Asynchronous</td>
</tr>
<tr>
<td>F2F</td>
<td>Lecture Lecture notes</td>
</tr>
<tr>
<td></td>
<td>Discussion or question and answer</td>
</tr>
<tr>
<td>Text</td>
<td>Books</td>
</tr>
<tr>
<td></td>
<td>Mail</td>
</tr>
<tr>
<td>Audio</td>
<td>Radio Audiocassette</td>
</tr>
<tr>
<td></td>
<td>Telephone or audioconference</td>
</tr>
<tr>
<td>Video</td>
<td>TV Videocassette</td>
</tr>
<tr>
<td></td>
<td>Videoconference</td>
</tr>
<tr>
<td>Digital multimedia</td>
<td>Webcasting, audio streaming, or video streaming</td>
</tr>
<tr>
<td></td>
<td>Web site, CD-ROM, or DVD</td>
</tr>
<tr>
<td></td>
<td>Online chat or instant message</td>
</tr>
<tr>
<td></td>
<td>E-mail or discussion forum</td>
</tr>
</tbody>
</table>

Source: Adapted from Bates and Poole 2003: 55.

- Text (including still graphics)
- Analog video
- Digital multimedia

Technologies, in contrast, are physical, mechanical, or electronic capabilities that are used for symbol transmission and communication. Books, radio, television, cassettes, CDs, and Web sites are examples of one-way broadcasting or one-to-many technologies (that is, technologies in which a single source is disseminated to many individuals). They are good for information dissemination. Postal mail, telephone, videoconferencing, e-mail, and e-discussion forums are examples of two-way technologies, which allow interactions such as question and answer, discussion and debate, feedback, and collective work. Table 3.1 summarizes the major technologies and media that can be used in blended learning in the GDLN context by listing all of the major ingredients for an optimal mix. This list is not exhaustive, but it covers the elements most often used in GDLN programs.

Synchronous physical mode

The synchronous physical mode refers to direct, F2F, live human contact, as in these instances:
- Instructor-led or facilitator-led classes, lectures, and conferences (participants assemble in one place)
- Hands-on laboratory activities and workshops (participants assemble in one place)
- Field trips (participants assemble in one place and move together)
- Local F2F activity in a distance learning program (participants gather at GDLN centers, with a local facilitator at each site)

Synchronous virtual mode

The synchronous virtual mode refers to two-way, real-time interactivity (that is, seeing each other on-screen):

Ingredients of GDLN Blended Learning

With a general understanding of blended learning in hand, it is possible to take a look at the nature of blended learning in the GDLN context by listing all of the major ingredients for an optimal mix. This list is not exhaustive, but it covers the elements most often used in GDLN programs.
• VCs (GDLN’s main technology, in which participants gather at multiple learning centers in real time); audio link is an option or backup that can be integrated into a VC
• Video streaming for maximum outreach and flexibility (also called Webcasting), which can be requested together with VC connection at an extra cost; other supplemental features include instant messaging or chat (written form)

**Self-paced asynchronous mode**

The *self-paced asynchronous mode* refers to forms of learning that are not live:

• Online learning, which requires an Internet connection:
  o Sending and receiving e-mail (for communication and attached files of modest size)
  o Participating in an e-discussion forum (for example, the Dgroups at http://www.dgroups.org/)
  o Web searching, reading, or downloading files
  o Studying an e-learning course hosted by a Web site or by a learning management system (LMS), such as Moodle
  o Viewing tapes through “video on demand” (for example, B-Span of the World Bank Institute, at http://info.worldbank.org/etools/bspan/index.asp)
  o Conducting or completing a survey, test, or assessment online
• Off-line learning, which is important when an Internet connection is expensive or not always available:
  o Studying an e-learning course stored on a CD-ROM (for example, the “Microfinance Distance Learning” course developed by the United Nations Capital Development Fund)
  o Studying content stored on CD-ROMs or DVDs, including text, Microsoft PowerPoint presentations, video clips, and so on
Three Major Blended Delivery Modalities Used in GDLN Asia-Pacific

The GDLN elements discussed earlier can be blended in numerous ways to meet learning objectives and to fit the prevailing situation. The design of program delivery is mainly governed by the location of participants and the delivery mode selected to maximize the effect of the learning process. As illustrated in figure 3.1, the traditional classroom and pure e-learning are at opposite ends of the spectrum, whereas various blends fall into the wide range in between. These blends can be categorized into three major delivery modalities:

1. A delivery modality that is face-to-face (F2F) based. In this modality, a class or conference is enhanced by using information and communication technology (ICT). Most participants and resource people remain at one place for most of the time.

2. A delivery modality that is videoconference (VC) based. In this case, participants and resource people gather at connected sites for most sessions.

3. A delivery modality that is e-learning based. In this modality, participants learn at their workplace or home most of the time, but they will gather at a VC site once or several times during a course to interact.

F2F-Based Blended Learning

Conventional F2F learning becomes blended by adding VC sessions to link remote speakers or participants for the purpose of enriching learning resources or for increasing accessibility. E-mail, Web sites, or some e-learning materials may also be used to improve communication and interaction or to facilitate group collaboration before or after the class or conference. When F2F is maintained as the dominant delivery mode, the use of ICT should be modest and easy to organize. F2F-based blended learning can be the first step for universities and educational entities that wish to start using the Global Development Learning Network (GDLN). This type of blended learning approach can be implemented with a minimum change of program content design and little extra administrative work.
Box 4.1. Asian Institute of Management 64th Management Development Program: A F2F-Based Blended Learning Program

Since 2003, Asian Institute of Management faculty members have begun introducing videoconference and e-learning components into their traditional programs. The 64th Management Development Program (June 14–July 22, 2004) was a six-week face-to-face program. Students from all over the region traveled to the Philippines and stayed on the campus in Makati City, listening to and interacting with professors in the classroom.

Professor Patt Lontoc, program director at the AIM Executive Education and Lifelong Learning Center, is a champion of using ICT in teaching. She added two videoconferencing sessions to the program to bring regional and international perspectives to students. The first VC was on Human Capital Management in the 21st Century and was led by Felipe Alfonso, former AIM president and current executive director of AIM’s Center for Governance and Corporate Responsibility. The second VC was on Accessing Direct Foreign Investment in Japan and was chaired by Toru Tokuhsa, director general of the Japan Bank for International Cooperation. The sessions were linked to the Republic of Korea and to Sri Lanka through the GDLN. As an additional benefit, the presentations by international experts and the discussion by participants generated some new learning materials for the program.

Source: Authors, internal communication, Asian Institute of Management and World Bank Development Resource Center.

An example of an F2F-based GDLN blended program is the Asian Institute of Management (AIM) 64th Management Development Program (see box 4.1). In this program, which was started some years ago by several faculty members who have championed the use of ICT in teaching, AIM professors integrate videoconferencing into their traditional on-campus seminars. By adding one or two VC sessions to the existing programs, the learning resources are enriched and updated. Participants are excited about the power of technology and appreciate the opportunity to interact with leading experts and peers in other countries.

This blended approach is relatively easy and quick to implement. Compared with an approach that uses e-learning directly, the investment and risk are both low. This blend type is recommended to faculty members of educational institutes, especially institutes such as AIM that host a GDLN center.

VC-Based Blended Learning

VC-based blended learning is networked learning in a distributed classroom model. In this model, there is a central classroom where the teacher is located—the initiating site—and several other distributed classrooms that are linked at a distance. Every participant can hear and see the central classroom. VC technology is a powerful tool for reaching people in different countries. It allows them to communicate in real time on-screen. Normally, the program organizer at the initiating site sets the agenda and the rules and leads the communication and interaction. F2F activities led by a local facilitator at each site are designed and arranged before or after the VC session. These activities capitalize on the fact that participants are together in one place. If available, Web sites, CD-ROMs, and e-discussion can provide extra content and can expand the possibilities for communication and interaction.
VC-based learning is the most frequently used blend type for GDLN programs, because it can meet various communication and learning needs. This blend enables regional or global dialogue or knowledge sharing and can support communications on various topics, especially in crisis situations such as a disease outbreak or a natural disaster, when travel is limited or impossible. It can be used to conduct workshops, seminars, and structured courses with multiple countries to scale up. Because about 70 percent of the cost of traditional training goes to travel, the use of VC-based blends for learning is economical.

An example of the VC-based GDLN blended program is the Total Quality Management (TQM) course of the Asian Productivity Organization (APO) (see box 4.2). The TQM course is one of APO’s flagship programs. It has been delivered in the F2F mode for many years. However, TQM knowledge and experience still depend on a few famous Japanese experts, who disseminate their knowledge and experience through lectures that use slides as visual aids.

The Tokyo Development Learning Center (TDLC) task manager and instructional designer modified the original design of the F2F seminar by shortening the lecture time to make the course more focused on key topics and by adding interaction time for questions and answers and discussion. Local facilitators were hired and trained. Briefings and rehearsals were conducted to familiarize lecturers with VC technology.

After TQM was converted to a distance learning course, access was easier, flexibility increased, and significant cost savings were gained in terms of expenditure per participant. Conversion also enriched learning resources by allowing exposure to more experts and multiple field-trip venues. Participants and APO managers were positive about the pilot delivery.
Since the successful pilot program in 2004, APO has steadily expanded its use of blended learning as a cost-effective and environmentally friendly alternative to its traditional training method. In 2005, another course, Green Productivity and Integrated Management Systems, was converted into a blended learning course. In 2006, two courses were delivered five times in 12 countries. In 2007, two new converted courses, Toyota Production System and ISO2000, plus the Green Productivity course, were delivered to 16 countries and reached more than 900 participants. In addition to the significant cost savings, APO had another reason to adopt this new delivery modality. K. D. Bhardwaj, the program officer at APO, noted, “Videoconference is a good way to care for the environment. When we reached 900 participants in distance mode we saved 900 flights.”

The VC-based blended learning approach can be used to convert an existing high-quality and important program to distance learning, without significant investment or efforts to develop e-learning material. The traditional lecture can be quickly converted into a presentation through videoconferencing. Compared to an e-learning based approach, VC-based blended learning is easier and quicker to prepare. When there is an urgent learning need or a mandatory request, a VC-based learning event with good presenters can quickly be planned and prepared.

**E-Learning-Based Blended Learning**

E-learning-based blended learning is mainly e-learning, but mixed with local F2F activities and VC sessions to achieve the best learning result. Most content is delivered to participants through computers and the Internet. Experience shows that a preparatory VC is very useful for the organizers, local facilitators, and development learning centers. A VC at the beginning of the course helps all participants understand the methodology and organization and, most important, establishes the feeling of a learning community. Local facilitators who lead interaction at the learning sites are essential in all distance learning situations. Local facilitation is one of the best GDLN practices. In this blend type, it is important to use high-quality e-learning material.

An example of e-learning-based blended learning is the Microfinance Training of Trainers (MFToT) course (see box 4.3). The Microfinance Distance Learning (MFDL) course developed by the United Nations Capital Development Fund is a high-quality e-learning material for self-study. The well-designed and well-developed e-learning package is comprehensive and interactive, and it provides most of the teaching functions of the MFToT course to all participants. At the same time, online tutoring is important for providing feedback on assignments and keeping the course on schedule.

The four VC sessions in the MFToT course expand the e-learning material. They add presentations that include important debates and expose participants to key issues in microfinance. Most important, they facilitate human contact and real-time interaction between participants and international experts. The VC sessions at the beginning, middle, and end of the course also enhance coordination and establish learning communities both within and between countries. As a consequence, the dropout rate is significantly lower than for similar courses offered in pure e-learning mode.

There are other quality e-learning materials on development topics that can be delivered by this type of blended approach. The Australia National University GDLN Center is organizing a similar blended learning course on dengue fever. This course is based on another quality CD-ROM reviewed by the
Box 4.3. Microfinance Training of Trainers: 
An E-Learning-Based Blended Learning Program

More than 1 billion poor people are excluded from the formal financial systems of their countries. Microfinance has evolved as an instrument for economic development and poverty reduction that ensures the provision of financial services to low-income and poor clients. It helps poor people build their capacity to generate income, so they can improve their education, health, and nutrition and thus reduce their vulnerability.

In 2005, the International Year of Microcredit was proclaimed by the United Nations General Assembly, and three international development organizations—the United Nations Capital Development Fund, Asian Development Bank Institute, and the Tokyo Development Learning Center of the World Bank—jointly sponsored and organized a blended ICT-based distance learning course, Microfinance Training of Trainers (MFToT). Since then, the course has been delivered three times to 13 Asian countries using the GDLN, in an effort to build training capacity to meet the growing demand for microfinance in developing Asia.

The blended ICT-based learning activity combines three major types of technology: (a) self-study using CD-ROMs and a workbook supported by online tutoring and discussion, (b) two-way interactive videoconferencing with live online streaming, and (c) local gatherings at GDLN centers. Major learning activities include the following:

- Three months of self-study using a workbook with two CD-ROMs of computer-based instruction and selected readings comprising 11 lessons. The learning pace is about one lesson per week, according to a schedule with specific dates.
- Online tutoring through e-mail provided to participants, who complete 11 assignments, take a final exam, and participate in online discussion.
- Four VCs containing seven presentations on key issues, country cases providing supplemental content to the CD-ROM, and opportunities for interaction with international microfinance experts. VCs are also used to build learning communities and morale and to handle administrative issues.
- Local face-to-face activities organized at GDLN centers. Participants meet their tutor or local facilitator to discuss country-specific issues and challenges. They also form a community of practice in the country.

The high-quality interactive e-learning material developed by the United Nations Capital Development Fund has been critical to the success of the MFToT program. The learning package, including the workbook and the interactive CD-ROM, is being translated into six Asian languages.

Source: Authors, internal communication, Tokyo Development Learning Center, World Bank.

Asian Development Bank Institute. The World Bank Institute has developed many e-learning courses, such as The Health of the Poor, Fiscal Decentralization, and Trust Fund Management. These courses are delivered in an approach that is e-learning based.

It is important to note that without quality e-learning material this approach is unlikely to succeed. Many training organizers have experienced frustration with poor e-learning courses. It is recommended that the e-learning-based blended approach be selected only when there is well-developed e-learning material available. Normally, the GDLN is concerned with program delivery and not with the costly and complicated content development process.
A useful reference for selecting appropriate blended delivery modalities is found in table 4.1, which summarizes the major features and suitability of the three modalities. In table 4.1, from left to right, the accessibility of targeted audiences and the flexibility of learners increase. However, at the same time, costs can increase because of the need for high-quality e-learning material, longer preparation time, and higher pre-investment expenditures.
### Table 4.1. Features and Suitability of GDLN Blended Delivery Modalities

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Traditional F2F</th>
<th>F2F based (ICT-enhanced class or conference)</th>
<th>VC based</th>
<th>E-learning based</th>
<th>Pure e-learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location of most participants</td>
<td>Participants and resource person are in one location.</td>
<td>One main location is used.</td>
<td>Multiple locations (GDLN centers and sites with a VC facility) are used. Participants must travel to one of the locations at a certain date and time.</td>
<td>Multiple locations (GDLN centers and sites with a VC facility) are used. Participants must travel to one of the locations at a certain date and time.</td>
<td>Learning can take place anywhere, including participant’s home or office or anywhere where there is access to a computer and the Internet.</td>
</tr>
<tr>
<td>Description</td>
<td>All activities are conducted F2F. One instructor does everything.</td>
<td>Most of the program is delivered F2F because most participants are gathered at one main venue. VC is introduced to link remote speakers or participants and to enrich learning resources or increase accessibility or publicity. E-learning is used to improve communication and interaction or to facilitate group collaboration before or after the class or VC.</td>
<td>Most contents of the program are delivered by VC to multiple sites. An organizer at the initiating site sets the agenda and rules and leads the communication and interaction. Local F2F activity at the site is led by a local facilitator before and after the VC. E-learning is used to provide more content and to expand communication and interaction or to facilitate group collaboration.</td>
<td>Most content is delivered to participants through e-learning programs on the computer and Internet. A few VCs are held to enhance communication and interaction. Local F2F activity is led by a local facilitator and can be organized before or after the VC or at other convenient times and locations.</td>
<td>The major mode of learning is self-study. Participants work at the pace set by the instructor. E-mail, discussion forums, or online chats are set up for interaction.</td>
</tr>
<tr>
<td>Features and suitability</td>
<td>This modality permits maximum human contact, but access and flexibility are limited. Everybody shares the same pace and contents. A lot of travel is involved.</td>
<td>F2F is the dominant mode, but it is enhanced by ICT. Maximum use can be made of the existing program material. Minimum changes to the original design are required. This modality can be the first step for gaining experience in ICT.</td>
<td>Among the various distance learning modalities, this one is the closest to traditional learning. VCs allow people to meet F2F at a distance. VCs are a powerful tool for reaching people in different locations and countries. This modality can be the first step in converting an existing course to blended learning. It is also suitable for holding important one-time events or for communicating urgent mandatory tasks to people in various locations. It is useful in circumstances where travel is prohibited.</td>
<td>This modality is close to the e-learning mode. It adds F2F human contact by VC and local activity to increase interaction. It can reduce the dropout rate associated with pure e-learning. This modality requires good e-learning material. Participants should be able to travel to a VC site.</td>
<td>This modality is the most accessible for participants anywhere. It requires high-quality e-learning material and, thus, high investment in course development. It requires an online administration tool. Drop-out rates are sometimes high because of the lack of human contact; however, this form is suitable for mass audiences.</td>
</tr>
<tr>
<td>Major scenarios based on real examples</td>
<td>• A World Bank Institute flagship seminar is held in Washington, D.C. • An East Asia and Pacific regional seminar is held in Bangkok. • World Bank training courses are conducted in many countries.</td>
<td>• A remote speaker is linked by VC to enrich learning resources (box 4.1). • A speaker is traveling outside the venue. • Extra participants are linked by VC to benefit the session. • Subsites are linked by VC to the main conference venue for observation or limited interaction. • Webcasting is done so that an important conference can reach a public audience.</td>
<td>• A distance-learning version of a structured course is created to scale up a quality program by reaching multiple sites. • A distance-learning version of a short seminar is held. • National, regional, or global dialogue is facilitated through a VC. • Knowledge sharing is facilitated among several sites. • Discussion and dissemination of information on an urgent issue, such as infectious disease, takes place quickly and broadly. • A VC links people in different places for various purposes.</td>
<td>• A distance learning version of a structured course is held (box 4.3) • E-discussion of a community of practice is facilitated. • Collaboration of a virtual group is facilitated.</td>
<td>• A distance learning version of a structured course is held over the Internet. • Ongoing e-discussion of a community of practice is facilitated. • Collaboration of virtual group is facilitated.</td>
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GDLN Learning Programs
in Asia-Pacific

The content of Global Development Learning Network (GDLN) programs and learning activities focuses primarily on policy issues in the development agenda of client countries and on the related skill sets needed to inform policy (for example, data collection and measurement, statistical analysis, project management, and economic forecasting). The sharing of technical knowledge in the implementation of reform programs across a spectrum of development themes such as health, education, fiscal management, infrastructure, rural and urban development, microcredit, and so forth also constitutes a major portion of the program of activities in the GDLN calendar.

In the World Bank’s fiscal year 2006, the GDLN allocated 32 percent of its events to Global Dialogues, 31 percent to meetings, 18 percent to courses, and 3 percent to workshops. Web-based activities accounted for approximately 7 percent of the remaining activities.

Since its launch in November 2004, GDLN Brazil and its partners have been working closely to promote knowledge sharing, capacity enhancement, and learning activities in areas such as health, education, municipal development, poverty reduction, decentralization, transparency, anticorruption, urban management, and rural development in the northeastern part of the country. Partners and participants have included government officials and entities, the private sector, nongovernmental organizations (NGOs), universities and learning institutions, and the general public (GDLN 2005).

Four Tokyo Development Learning Center Business Lines

The GDLN, in seeking to promote quality programming for development learning and knowledge sharing, has supported many innovatively designed and implemented events. In 2004, soon after its establishment, the Tokyo Development Learning Center (TDLC) classified various programs into four business lines (TDLC 2004):

1. Operations of development agencies:
   - The GDLN will conduct learning activities for operational staff members of the
World Bank and other donor agencies and their client project management units in dialogues associated with Country Assistance Strategy, Poverty Reduction Strategy Papers, Economic and Sector Work, Analytical and Advisory Assistance, and other research.

- The GDLN will support capacity-building components as part of, or linked to, lending and development projects of the World Bank and other donor agencies to enhance the quality of their operations and as a vehicle to enable the process of project preparation, appraisal, and implementation; evaluation; and dissemination of lessons learned.

2. Communications:
- The GDLN will be promoted as a channel for conferences and formal events, and for use in crisis management such as in the recent SARS (severe acute respiratory syndrome) and avian flu epidemics, when travel is not an option.
- The convening power of the World Bank at a central and country level combined with the reach of the GDLN across the world are key business strengths in attracting clients to use the service.

3. Networks and communities of practice:
- The GDLN will be used to conduct policy dialogues to disseminate findings and best practices among peer groups. Such dialogues are an effective and novel way to build capacity before or during development projects.
- The World Bank has many ongoing initiatives that support communities of practice (CoPs). The GDLN has an opportunity to work with those initiatives to develop business and build a unique set of specialized skills and methodologies.

4. Structured courses and training programs:
- The GDLN will deliver new courses or strengthen existing courses offered through the GDLN.

- Institutions such as government development agencies, universities, and professional organizations are the target content suppliers that will benefit from greatly increased reach and penetration of markets that would otherwise be inaccessible because of costs, staff availability, and time constraints.

**Operational Work of Development Organizations**

The World Bank and other development organizations can be important clients of the GDLN for their operations in development work. On average, the Network Operational Center of the World Bank in Washington, D.C., bridges 70 to 80 videoconference (VC) sessions per day. Although most operational meetings conducted by World Bank staff members use the internal VC network, many operational activities have an outreach feature and must work with external clients and partners. The GDLN can play an important role in supporting these activities, such as dissemination programs built around the annual *World Development Report* and other research outcomes and publications, joint seminar series or conferences with major development partners, CoPs in support of World Bank teams and counterparts on various thematic areas, and public consultation on policy or projects.

The GDLN sectoral programs of the World Bank’s East Asia and Pacific (EAP) region provide an example of how the GDLN can support the World Bank’s operational work. The GDLN has been recognized as a powerful tool in connecting countries, organizations, and communities to enhance their engagement and involvement and to meet demands of clients and partners in gaining access to policy advice, international experience, and best practices. In 2006, eight operationally relevant programs with focus on establishing CoPs, delivering of training and learning, or assisting with dis-
Box 5.1. EAP GDLN Sectoral Programs

In 2006, the EAP GDLN received a contract from the World Bank EAP region to deliver eight operations-related programs using a wholesale approach. Several programs are listed below to illustrate the operational work of development organizations specified in the business lines:

1. A program called Strengthening Forest Law Enforcement and Governance delivered four training seminars to each of five country sites: Indonesia, the Lao People’s Democratic Republic, the Philippines, the United States (Washington, D.C.), and Vietnam. Participants were policy makers and technical specialists from the forest governance communities.

2. A program titled Building Partnership between Youth and Policy Makers: Operationalizing 2007 World Development Report delivered two seminars and reached more than 200 participants from various youth groups and NGOs across Cambodia, Indonesia, Japan, the Lao People’s Democratic Republic, Singapore, Thailand, and Vietnam, as well as Washington, D.C. The program followed up on the initial launch of the World Development Report 2007 (World Bank 2007), which emphasized youth as partners in the development agenda.

3. A program called Success Factors for Road Management Systems offered two seminars. The first focused on technology for road management systems and business processes and on data collection for road management systems. The second focused on principles of data collection, location referencing, and data collection technologies. The seminars, which were based on recent findings from two international projects undertaken by the World Bank, provided an opportunity for participants from governments and development agencies, technical agencies, academia, and consultants working on infrastructure management to discuss and exchange views on (a) how to ensure that the implementation of a computerized road management system would be effective and sustainable and (b) how to make appropriate decisions with regard to collecting data for road management systems.

4. The World Bank–Association of South East Asian Nations (ASEAN) Seminar Series on Regional Trade Integration in EAP delivered its first seminar in June 2007. The seminar reviewed research work on rules of origin in services and trade using a case study of five ASEAN countries undertaken by the ASEAN Economic Forum Research network and the World Bank’s EAP Vice Presidency. Approximately 30 ASEAN participants discussed the benefits and drawbacks of different approaches to liberalization and shared the experiences of countries in the EAP region with experienced resource people. All ASEAN participants were located at the development learning center (DLC) in Udyana, Denpasar, Indonesia, while resource people were at sites in Geneva, Telecom Malaysia, the Asian Institute of Management (at the Philippines DLC), and the TDLC.

Through the GDLN, these programs enabled a broad exchange of ideas and provided an opportunity for exploring issues of common interest among targeted audiences. The programs thus demonstrated a consultative and partnership aspect of the World Bank with its development partners and clients. The GDLN programs also helped facilitate client access to World Bank knowledge products, analytical and advisory assistance, and other research findings.

Source: Authors, Tokyo Development Learning Center, and World Bank.

The dissemination of knowledge products and publications were selected and funded by the EAP region’s innovation budget (see box 5.1). To date, most programs have been successfully completed. These programs are operationally relevant and cost-effective, and they have received very positive evaluations from program providers and participants.
Partnership with other bilateral and multilateral development agencies, as well as with governments, universities, and NGOs, further expands the market for the GDLN. Partners or clients, such as organizations of the United Nations, the Australian Agency for International Development, the Islamic Development Bank, Timor-Leste’s Ministry of Justice, the Honduran Council for Science and Technology, and the U.S. Department of Treasury, conducted about half of all GDLN programs between July 2004 and June 2005.

In Japan, the TDLC provides facilities and services to the Japan Bank for International Cooperation (JBIC) to meet JBIC’s operational and staff training needs. The TDLC also collaborates with the Japan International Cooperation Agency (JICA) to connect the GDLN to JICA-Net (http://www.jica-net.com/), which has 28 domestic centers and 53 centers worldwide. This partnership has significantly enlarged the coverage of both the GDLN and JICA-Net geographically and has increased opportunities for programs.

Community of Practice

Because of the power of outreach and communication by the GDLN, CoP becomes an increasingly important component of GDLN programs. CoP refers to an informal network of professionals and practitioners who participate in a similar practice or share a common interest in a specific topic or topics. The CoP is not established or appointed by an executive order, but rather is self-established on a voluntary basis. Members share information and knowledge and solve problems in a virtual environment or face to face.

CoPs are important for development because they serve as ongoing venues for learning and knowledge sharing involving people who share a similar practice or profession and have similar interests and challenges. A member of a CoP can get a quick response to his or her inquiries from other members. Through formal and informal communications, participants develop, capture, and share best practices.

Although every CoP is unique, several essential traits, or critical building blocks, make a CoP sustainable and successful. According to the Knowledge Sharing Unit at the World Bank Institute, the most critical building blocks include an interesting and manageable topic and the presence of a qualified and active facilitator. Other key building blocks include a core group of active members, a technology platform that supports convenient and reliable communication between members, and funding, if needed.

Capacity Building

Rapid and sustainable development requires capacity in the public and private sectors and an integrated capacity involving individual, organizational, and institutional levels (Thomas 2006).

Capacity for development can be measured by how effectively and efficiently a country mobilizes and uses resources to define and achieve its development objectives. GDLN programs that focus on capacity building enhance learning and knowledge sharing to improve capacity for development at all three levels.

Capacity at the individual level may refer to knowledge, skills, competence, and commitment to community and society. In organizations, capacity refers to the organization’s ability to channel the potential of individuals to solve development problems. It transcends individual capacity building and includes incentives for the organization to effect change. At the societal or institutional level, capacity
refers to the ability to define and shape the institutional framework and to create mechanisms that facilitate development change. It also includes policies and incentives, cultural learning, and leadership that will enable change. The question is, how can the GDLN contribute in all three categories?

**Individual Capacity Building**

In support of individual capacity building, the GDLN offers a variety of courses, programs, and knowledge-sharing opportunities, plus a space for creating formal and informal learning and knowledge sharing. However, individual capacity is effective only in as much as the individuals or clients work in an enabling environment that will allow them to apply new skills and knowledge appropriately. The GDLN experience shows that there is a need to go beyond individual capacity to that which encompasses capacity more broadly. Capacity building started with the individual, but then the focus broadened to include organizational and societal capacity.

**Organizational capacity building**

Organizational capacity building takes place when individuals are brought together to learn, share knowledge, and take action. The GDLN can link and bring people together synchronously and asynchronously through blended learning and knowledge sharing. It also places emphasis on action learning, fosters CoPs, and supports knowledge networks. The scaling up of learning allows more people in the same organization or unit to participate and share the same learning and knowledge-sharing experience so that they can support each other and take action together. Action learning with intact teams put together to develop a new program or a task force charged with specific goals is increasingly popular. Generally, action learning is effective with a group formally designated to complete a process. GDLN enables that team to create a space where team members can carry out their activities and interact with teams from other areas or from other countries.

**Societal capacity building**

Societal capacity building presents a greater challenge, and the GDLN is tackling this challenge through anticorruption and governance programs and high-level dialogues at the national and international levels. A GDLN leadership seminar using former prime ministers or other official ministers as resource people would be an example of societal capacity building.

To learn more about GDLN programs, visit the GDLN Web site and read the “Story of the Week” archives (http://www.gdln.org). To learn more about GDLN programs in Asia-Pacific, visit the TDLC Web site (http://www.jointokyo.org).
Delivery of Blended Learning Programs by the GDLN

Two major learning delivery models are broadly used in distance learning: the open learning model and the distributed classrooms model (UMUC 1997). Global Development Learning Network (GDLN) blended learning combines the two models in various program contexts to maximize accessibility, flexibility, and learning results of participants.

The Open Learning Model

The open learning model, which was developed from the established independent study model, allows students to study anywhere and at any time and to follow a syllabus and use course materials provided by the training institution. An instructor or tutor provides guidance, answers questions, and evaluates the learner’s work. The interaction is achieved through communication technologies such as postal mail, telephone, e-mail, or online tutoring.

Most open universities and distance learning programs use the open learning model as the major delivery mode to link teachers and dispersed students. The advantage of the open learning model is its high accessibility and flexibility. However, because of the absence of a learning community and relatively weak learning support to isolated individual learners, the student dropout rate can be high, especially in adult training and learning. In some cases, a residential requirement is included at the beginning and end of the program to improve communication and human contact.

The Distributed Classrooms Model

The distributed classrooms model is a simulation of the traditional classroom environment in a multiple site situation. Participants must be in a particular place at a particular time to attend a class session. All synchronous technologies, either one-way (broadcasting) or two-way communications, can be used in the distributed classrooms model.

The China Central Radio and TV University (CRTVU), the largest open and distance
learning organization in the world, is a unique example of the distributed classrooms model. Under CRTVU, the hub of the system is located in Beijing. There are 44 provincial-level TV universities (TVUs), 930 municipal-level TVUs, and 2,021 county-level workstations. They host, in total, 22,237 learning centers nationwide.

This four-level learning system provides administrative services, courses, and learning support to 2 million students. Students are enrolled in a learning center close to where they live, and they go to the center to attend class, meet other classmates, and receive tutoring from local teachers. Compared with those who received courses by television in the 1980s and 1990s, students today enjoy more interactivity through two-way videoconferencing and interactive multimedia materials. They also have more flexibility because of the availability of thousands of online courses.

A Combination of Both Models in GDLN Blended Learning

In GDLN blended learning, the GDLN centers that are connected by the global videoconference network are distributed distance learning classrooms. The Moodle open source learning management system, which was selected as the e-learning tool for participants, supports the open learning model. According to the Moodle Web site, “Moodle is a course management system (CMS)—a free, Open Source software package designed using sound pedagogical principles, to help educators create effective online learning communities. You can download and use it on any computer you have handy (including webhosts), yet it can scale from a single-teacher site to a University with 200,000 students.” The Web site says, “Moodle has a large and diverse user community with over 330,000 registered users on this site alone, speaking over 70 languages in 196 countries.” For more information, see http://moodle.org.
In practice, the combination of the two delivery models creates many blended learning possibilities and can offer more flexibility, accessibility, and interactivity to participants. The e-learning-based blended learning approach, such as that used in the Microfinance Training of Trainers (MFToT) course, uses a combination of the two delivery models (see figure 6.1). In August 2007, when the MFToT course was delivered for the fourth time, more than 600 participants from all over the world registered online, submitted assignments, obtained grades, and joined e-discussions at Tokyo Development Learning Center’s Moodle site (http://mftot.jointokyo.org). Participants in the course study the e-learning material on CD-ROM anywhere and anytime according to a schedule set up by the course team. They communicate asynchronously with their tutor by e-mail and with other participants by joining the e-discussion. In this open learning model, participants do not have any direct human face-to-face (F2F) contact.

The MFToT blended approach includes four videoconference (VC) sessions in its three-month learning process. This part employs the distributed classroom model. In the fourth MFToT course, 12 distance learning centers in Asia and Pacific countries are connected to have synchronous communication. Participants go to a center close to where they live or work and listen to and interact with a microfinance expert. At each participating center, a local class is led by a local facilitator. Participants meet their peers, who share similar practices and face similar challenges. They get to know one another and form a local learning community to support one another. In Sri Lanka and Vietnam, because of strong learning coordination by the GDLN center, extra local learning sessions are organized to meet specific needs of the participants. Graduates from a previous course teach and tutor new participants. In this way, they become leaders of their learning community.

Major Players in GDLN Delivery:
Roles and Responsibilities

Unlike an educational or training institute, the GDLN does not offer learning programs or supply content. Functioning as a knowledge broker, it identifies programs and mobilizes content for development through partnership. The GDLN supports and hosts communications and learning activities that have direct or indirect connections or have a positive influence on development at various levels: individual, organization, local community, or country and region.

GDLN program providers

Any organization that can provide these programs or activities using the GDLN facilities can become a GDLN program provider. In addition to development organizations and agencies such as the World Bank, various agencies of the United Nations, the Asian Development Bank, the Japan International Cooperation Agency, the Japan Bank for International Cooperation, government agencies, universities, educational and research institutes, the private sector, and nongovernmental organizations (NGOs) have also been or can be GDLN program providers.

A program provider must fulfill all of the responsibilities of a program organizer. The distance learning mode requires more work than implementing a F2F program, because the organizer needs to communicate with organizations and people who are at a distance and to coordinate with many people to collectively implement a learning event. The organizer also must be able to use new technologies, some of which can be difficult for first-time users.
**Task team leaders and hosting centers**

The program should have a *task team leader* (TTL), who will, on behalf of the program provider, take on all responsibilities. Although an assistant or a junior staff person could handle much of the coordination work, a designated strong TTL is critical, because he or she has the authority and ability to make decisions on program design and implementation as well as on financial issues.

Program providers are clients of GDLN centers. The program TTL chooses to work with one center that will act for all other centers that are targeted. To support program providers, the GDLN center that works closely with the program provider will function as the program *hosting center*. The hosting center, alone or acting on behalf of the program provider, takes the central coordination and administration role for the program. Major roles and responsibilities of the hosting center include the following:

- Assist, many times on behalf of the program provider, with executing all the steps for conducting a GDLN program, from submitting a program proposal to scheduling and booking a VC in the Activity Management System (AMS)\(^1\)
- If necessary, provide instructional design service to the program provider to help convert its traditional F2F program into a blended learning model using the GDLN, making sure that the program design fits the GDLN technologies and is pedagogically sound for adult learners
- Market the program and distribute program materials to target audiences and other centers
- Coordinate with other centers on all aspects of the program and conduct a preparatory VC to clarify roles and responsibilities
- Contact and meet resource persons, and prepare them to use the VC facility
- Initiate a technical test if a new site is involved or conduct a rehearsal if the event is high profile or complicated
- Lead the preconnection session, and play a major role in ensuring the technical quality of the VC session

**Participating centers**

Other GDLN centers will function as *participating centers*. A hosting center can, at the same time, also function as a participating center if there are participants on-site. For a GDLN center to effectively deliver activities related to development problems, it should have a specialized profile that can offer space and facilities to accommodate the following functions:

- Group videoconferencing with simultaneous display of video and data
- Recording and playback of VC sessions and videotapes
- Multimedia access to the Internet at reasonable speeds and to CD-ROM-based resources
- Breakout sessions and small group discussions
- Printing and copying of learning materials

All of the features could be in one room or, more appropriately, in separate rooms. Typically, a center provides space for 30 people or more.

The roles and responsibilities of a participating center include the following:

- Using the AMS to express interest and confirm participation
- Following up by e-mail, using the AMS to clarify roles and responsibilities, negotiate payment, and sign business contracts
- Marketing the program locally
- Recruiting participants according to the instructions of the program provider in their country
• Providing or helping to hire a local facilitator to facilitate the local class or group of participants and providing learning support to participants
• Arranging translation of program material and arranging simultaneous interpretation of VC sessions when needed
• Responding to occasional requests for help in identifying a local expert as speaker or panel member or in organizing a local field trip for participants
• Providing training administration such as registering participants, keeping attendance records, administering evaluations, and issuing certificates

The participating centers should work seamlessly with the hosting center as a network to serve their clients. These services plus the operation of technical facilities (VC equipment, simultaneous translation equipment, computer, and high-speed Internet) make up the package that the GDLN advertises and sells to its clients.

Local facilitators

The local facilitator plays a key role in GDLN program implementation. Although GDLN centers should be able to provide simple program facilitation, the role of an effective local facilitator should be understood. The local facilitator’s role is similar to that of a facilitator at the hosting center, except that the local facilitator is at a distant location (in cases where the development learning center is a participating site) and the facilities and audience size may vary. GDLN best practice recommends that local facilitators be identified and hired at each site.

In the distributed classrooms environment, the local facilitator is the instructor of the local class. He or she shares various responsibilities with instructors at the hosting center and takes care of participants at the local class site. Major responsibilities can be divided into administrative work, learning support, and communication. For a simple VC event, the GDLN center will undertake the administrative and communication work plus minimum learning support without extra charge. But for a complicated blended learning course or difficult subject matter, professionals who understand the content should be hired as local facilitators to provide strong learning support. According to available GDLN materials, including the GDLN Toolkit (http://www.gdln.org), the major responsibilities of a local facilitator can be summarized as follows:

• Administrative work:
  o Participates in the preparatory session called by the program provider and hosting center so that roles and responsibilities are clearly understood
  o Is present at all sessions, arrives at site early to check preparation, greets participants and briefs them on facilities and equipment, and explains and answers questions about process and logistical arrangements
  o Maintains the participants’ roster and attendance record
  o Administers the evaluation activity, collects the end-course evaluation forms, and submits them to program provider
  o Receives learning material, prints handouts, and distributes learning materials to participants

• Learning support and facilitation:
  o Reads and prepares all assigned materials in order to facilitate communication and interaction
  o Organizes and facilitates on-site work groups and local discussion, ensures that participants are engaged and motivated, and manages group dynamics to keep participants active and focused
  o During the VC session, functions as the local moderator who introduces that local site, provides group re-
sponses from the site, and organizes questions from local participants
  o In case of technical failure in VC transmission, ensures that participants remain present and engaged by implementing a backup plan
  o Encourages participation and interaction among on-site participants and with other sites
  o Manages the time and session agenda from the local site to ensure quality implementation of the program
  o Fills possible gaps in the instruction by clarifying contents and learning material, explaining context of topics and possible applications, and providing brief summaries when necessary

• Communication:
  o Functions as a liaison between the program organizer and participants by providing feedback on learning issues, technical quality, and group morale and by providing suggestions for improvement
  o Liaises with the GDLN center administrator for logistical issues and participants’ requests

Profile of Participants in GDLN Programs

Participants in various GDLN programs are recruited mainly from target audiences that include decision makers and midlevel career personnel in government and government agencies, academia, civil society, NGOs, and the private sector, as well as community leaders. The majority of these participants are in developing countries.

The simultaneous direct reach of the network to many developing countries, as well as the expansion of infrastructure outside capital cities through local national networks such as those in Brazil and China, have made it possible for more and more mid-career professionals and practitioners in various fields and mid-level officials to become participants in GDLN programs.

Recruiting Participants: A Key to Learning Success

Educators and trainers are well aware that the task of selecting and recruiting relevant participants for learning events is critical. Even when the profile of a target audience is well defined in the file of information prepared to inform design decisions (program design file) participants are not easy to identify and recruit, especially in unfamiliar locales or countries. Poor recruitment can result in mismatch between the program and participants. Regrettably, many learning activities that were judged to have failed in achieving their goals have been well designed and implemented, and the weakness that led to failure was poor recruitment of participants.

In practice, there are many ways to recruit participants for GDLN programs in different situations, and the GDLN centers have an important role to play in identifying and selecting local participants. In the simplest situation, such as internal meetings or conferences, the program provider has a list of invitees. The GDLN centers may need only to facilitate the local communication process to inform those people and confirm their participation. In the case of the Asian Productivity Organization’s blended learning courses, the organization’s local offices in member countries take responsibility for recruiting participants. However, in most situations the distant program provider provides only a profile of a target audience and expects the GDLN center to be the access point to that country and the marketer of the programs to key local client entities and groups.
To assist marketing efforts, a well-prepared marketing tool is very important. The tool can be a simple one-page announcement of a VC event or a program brochure to a comprehensive Web site. Normally, the hosting center will help the program provider make the marketing tool available to all participating centers. The message should then be widely spread through public media (Web site, newspaper, and so on); organizational channels; or the e-mail network of previous partners and participants. The MFToT course used all of these channels to recruit participants.

With enough lead time and a clear description of the program, the appropriate people will choose to sign up and will become the most relevant participants. The higher the relevance of well-chosen participants to the program and its learning objectives, the better will be the probability of a good learning outcome. For example, in the MFToT course evaluation, the rating of the question that asked about “relevance of this course to your current work or function” was 4.1 on a scale of 1 to 5, from lowest to highest, whereas the rating of the question of “usefulness to you of the knowledge that you have obtained” was 4.3. The responses to the two evaluation items have a high correlation.

Notes
1 AMS was the online tool that the GDLN used to manage its programs and events. Its function included proposing programs, scheduling and booking VC sessions, identifying roles and responsibilities of each party, negotiating business terms, and signing contract and copyright agreements. AMS was replaced in 2007 by the much better GDLN Event Management (GEM) system, which is accessible on the GDLN Web site (http://www.gdln.org) under the GDLN Tools.
Learning Theories and Applications in GDLN Program Design

In paper 4, various blending options and opportunities for meeting learning challenges in specific learning situations were discussed. This paper will explore pedagogical aspects of the Global Development Learning Network (GDLN) program design and offer some basic guidelines and principles of learning design based on learning theories.

Major Learning Theories and Implications for Instructional Design

Instructional designers view each request for assistance as a unique situation, and they make design decisions with adult learning theory (andragogy) in mind. There are many learning theories that analyze and explain how people learn from different perspectives. The behaviorist, cognitive, and constructivist models are major learning theories that help researchers understand how and under what conditions learning occurs. Another learning theory that is highly relevant to GDLN program design is adult learning theory, which deals with how adults learn by describing adult learner characteristics.

The behaviorist model

Behaviorists such as Ivan Pavlov, Edward Thorndike, John Watson, and B. F. Skinner focused on the study of overt behavior that can be observed and measured. They defined learning as a change in behavior. Training became a primary means of changing behavior and improving job performance. The principles in Ralph Tyler’s (1949) Basic Principles of Curriculum and Instruction are based on the behavioral model. They have been adopted by teachers and trainers and include (a) definition of specific goals and objectives based on task
analysis, (b) description of content and learning activities, and (c) evaluation. Behaviorism’s strongest influence on instructional design is the inclusion of behavioral objectives in training and learning activities.

**The cognitive model**

The cognitive model focuses on brain activity that processes and structures information and on the ways in which an understanding of those processes can be used to promote learning. One difference between the cognitive and behaviorist models is that in the cognitive approach the emphasis is on the learner and not on the analysis of tasks. In addition, in the cognitive approach, there is a focus on connecting and integrating new knowledge with that acquired earlier by sequencing and organizing learning content and on pursuing means of enhancing learner attention, memory, and knowledge structure.

**The constructivist model**

The constructivist model sees learning as making sense of experience or as searching for meaning. Learners create personal interpretations of the world around them through experience and reflection. The instructional design associated with this model provides a learning environment that focuses more on the search for knowledge than on the knowledge itself. Learning programs using the constructivist model often contain case studies and field trips and foster reflection and collaborative knowledge sharing, which enable learners to add to their store of knowledge.

**Adult learning theory**

[Adult learning theory assumes that] *as a person matures (a) his self-concept moves from one of being a dependent personality toward one of being a self-directing human being; (b) he accumulates a growing reservoir of experience that becomes an increasing resource for learning; (c) his readiness to learn becomes oriented increasingly to the development tasks of his social roles; and (d) his time perspective changes from one of postponed application of knowledge to immediacy of application, and accordingly his orientation toward learning shifts from one of subject-centeredness to one of problem-centeredness.*

—Knowles 1980: 39

The majority of those who seek a way out of poverty and its associated lack of development are adults. So too are those who frame policies and plan and implement programs and services for poorer areas and populations and those in the formal education system who equip students with knowledge and skills that will continue the development process in the future. The GDLN has the responsibility of helping development stakeholders to share information, to learn, and to enhance their individual and collective capacities to solve development problems. Because a majority of development learners can be classified as adults, some principles need to be acknowledged if effective learning is to take place:

- Learners should be encouraged to participate in their own needs assessments.
- The expected outcome of the learning activity should be clear.
- A non-threatening environment should be created in which adult learners feel safe from intimidation arising from a lack of formal education or from a lengthy time away from education.
- Good relationships should be developed between teacher and learner and among learners.
Figure 7.1. The Learning Cycle

- An atmosphere must be created in which there is respect for decisions made by adult learners.
- Learning content must be well planned and sequenced.
- Learning by doing must be part of the learning process.
- Adults should learn about something that can be applied or used immediately—a concept known as the immediacy of the learning.

The Learning Cycle and Applications in Learning Design

Learning, whether individual or group, occurs in cycles.

—Allee 1997: 89

Originally developed by David Kolb (1984) and later adapted by other researchers who were trying to understand how people learn, the learning cycle (see figure 7.1) describes a learning process as a four-stage cycle involving a series of experiments: doing (action or experience); reflecting (observing, feeling, thinking); conceptualizing (making meaning); and planning (choosing future action).

Doing refers to an action or experience that provides a basis or reference for learning. Reflecting means making observations about the action or experience, such as debriefing or after-action review. Conceptualizing is interpreting experience and creating concepts and even mental models to explain the experience. Planning is making plans by adjusting behavior for future actions or experiments. The whole cycle will repeat as learning continues. However, learning does not take place in the same sequence for every person.

In learning design, both the experiential learning model and the action learning model try to ensure that learners (both individuals and groups)
go through a complete learning cycle. Doing so will help the learning facilitator cope with diversified learning styles of participants.

The experiential learning model is recommended in the GDLN Toolkit, in which the role of the facilitator is to engage learners in a four-step process corresponding to the learning cycle:

1. **Step 1.** There is an experience (or “sense of urgency to understand an experience”).
2. **Step 2.** The facilitator engages the learners in reflecting on the experience.
3. **Step 3.** The facilitator asks the learners to consider what the experience means and to draw a conclusion from the experience.
4. **Step 4.** The facilitator asks the learners to get involved in an application or practice activity, which draws their attention to how the learning applies to a real-world situation.

The World Bank Institute promotes action learning that focuses on finding solutions to problems, especially in industry; that involves adults; and that follows a cycle very similar to the experiential learning cycle described earlier. Action learning is built around six distinct interactive components through which a group of adults focus on a particular problem to find a solution that is put into action. The six components, which are described by Marquardt (1999), are as follows:

1. **A problem.** The problem should involve real business topics and challenges.
2. **A group.** The group may be an intact team or group of stakeholders.
3. **A questioning and reflection process.** A learning process is started at this point.
4. **A commitment to take action.** Goals or outcomes are described, a decision on an action plan is documented, a follow-up plan is put in place, and feedback is provided.
5. **A commitment to learning.** In the best-case scenario, the transfer of learning from the group to the organization is an explicit goal, but the goal can also be implicit or tacit.
6. **A facilitator.** This individual is external to the group but supports the group in meeting its goals.

According to Marquardt (1999), the action learning process results in powerful, significant, and transformative learning because it inherently embodies several key learning principles:

- Learning is increased when we are asked questions (or ask ourselves questions).
- Learning intensifies when we reflect on what we did in the experience.
- Group responsibility for the task empowers the members and enhances learning.
- By working cooperatively with others on real issues, a group can move to a higher level of learning relative to application, synthesis, and evaluation.
- People learn more when they do something, and they learn more as they feel more responsible for their task.
- Action learning is built on the entire learning cycle: (a) learning and creating knowledge through concrete experience, (b) observing and identifying the problem, (c) reflecting on the experience, (d) experimenting, (e) analyzing and forming generalizations from experiments, (f) planning solutions, (g) testing the implications of the generalizations in new experiences, and (h) beginning the process again.

**Application in Development Learning**

Every learning theory model—and there are many—has its view of how best to foster learning. Several movements or developments have arisen from the major learning theories described earlier. They include experiential learning, action learning, and active learning, to name but a few.
Because of the uniqueness of learning situations and the diversity of learners, the instructional designer needs to creatively apply learning theory to the situation. For example, when the objective is to disseminate or transfer information or knowledge, the cognitive approach may be appropriate. When the objective is behavioral change, the behavioral model—perhaps combined with the cognitive model—may promise the best results. When, as is often the case, there is no right answer from experts, people need to learn from their own and others’ experience and the constructivist approach may be indicated.

Note

1 Kolb’s experiential learning theory sets out four distinct learning styles (or preferences) of the individual learner: diverging, assimilating, converging, and accommodating.
All Global Development Learning Network (GDLN) programs need design input. The amount of input varies from a little to a lot. Sometimes intensive design work is required to ensure an effective and efficient delivery. GDLN provides instructional design service to new users and to new programs that are based on an existing program or are started from scratch.

In the case of the World Bank’s GDLN, a task team leader or a consultant takes responsibility for designing the subject matter content and works with the GDLN instructional designer to put the content in the most appropriate blended learning arrangement. Clients outside the World Bank would follow a similar model, with the program manager or a consultant working with the GDLN instructional designer. Using real examples, this paper examines the design process and provides some relevant techniques of designing a blended program using the GDLN.

**How a Program Starts**

A request to design a GDLN program normally comes as either a concept paper or a simple program idea. Sometimes, a manager or training coordinator of a GDLN center approaches and convinces a partner or client to use GDLN when a business opportunity arises. No matter how it is initiated, the most important foundation of a learning program is its justified learning or knowledge-sharing need.

During the initial contact stage, it is useful for the GDLN center to collect as much relevant information as possible about the program provider and the proposed program. Useful information includes the history of the program or activity (that is, whether it is new or existing, how many times it was previously delivered, what the evaluation results were, what problem is to be solved, why the GDLN is being used, and so forth) and the status of program design and materials (what type and format, such as Web site, CD-ROM, book, paper, or just slides). The status of resources available in terms of instructor capacity and budget allocation also is important and relevant information.

**Important Design Decisions**

The design of a GDLN program is a process of interaction between the program owner or
provider and the instructional designer. It is a process of jointly making a series of decisions on all aspects of the program by asking questions and answering them.

**Establish and justify the need**

The critical first step in laying a solid foundation for a learning activity is to examine, describe, and justify that there is such a need to be met and that a learning activity is the answer, or at least part of a comprehensive solution, to a problem or challenge faced by a particular group of people who are engaged in development activities.

To do so, the program provider must first provide information about the development problem in a broader context and then narrow the focus to a more manageable scope that will describe the program idea. Most GDLN program requests or ideas are associated with strong development needs. The task is to examine whether a training course or learning course or other type of learning program can help meet the need. If so, is the need well expressed and articulated in a way that leads to the preferred design?

A question to answer at this point is, who identifies and defines the need and how? Although the GDLN instructional designer must verify and confirm learning needs, help focus the client’s thinking, and arrive at a clearly articulated needs statement, the program provider normally should complete a learning needs assessment before proposing the program. The needs assessment could come from a survey conducted with a potential audience, from a previous program evaluation, or from opinions of experts. But sometimes the need simply comes as a mandatory request from the management of an organization. Many techniques have been developed for learning needs assessment. Those responsible for formulating such needs can themselves be trained in the effective use of needs analysis techniques.

**Select and describe the target audience**

The target audience influences program design. An instructional designer must know who the members of the target audience are, where they are in terms of organization and geographic location, and how they can be reached. A detailed profile of the learners is required. The profile will enable the designer to tailor the learning contents as well as the learning techniques and tools chosen. The profile questions will include the following: Who are the audience members? What are their roles and responsibilities in their daily jobs? What is their affiliation? What is their education level, and do they have a background in the learning topics? Why are they participating in the event? For some programs, the designer also needs to know the group’s age and gender profile. For implementation purposes, it is also important to know about potential language proficiency of participants, their accessibility to the training or learning venue, and their familiarity with relevant information and communication technology.

After obtaining a profile of the audience, the designer should also estimate their numbers and find out where they are. Which country, city, or rural location are they in? What facilities, such as classrooms, computers, and videoconferencing (VC) equipment will be available at that location? Is there a GDLN center there? If not, is a World Bank office or other VC facility available? What professional and technical staffing is available at each location? Will the participants be accommodated at the location, or will they have to travel to and from the location if the learning activity is longer than one day? The decision on where the learning will take place and how it will be organized depends mainly on the location of participants.
Box 8.1. Goals and Objectives: An Example from the GDLN Toolkit

**Goal**
The overall goal of this module is to help participants understand how environmental assessments can ensure sustainable development outcomes.

**Objectives**
- Evaluate the trade-offs between the three environmental categories to ensure fair screening of different projects.
- Identify through field-based examination the precise range of environmental impacts and estimate their relative importance.
- Given project data, prepare an environmental management plan that is based on guidelines provided to mitigate adverse environmental impacts.

*Source: GLDN 2005.*

For administrative purposes, if videoconferencing is to be included, the program provider needs to decide on the target countries and sites. The activity organizer may have the contact information of target organizations and even of individuals to whom to announce the event and distribute the brochure or e-mail. The GDLN center can help reach target participants through its network and contacts.

**Specify learning objectives and outputs**

The most critical question from the instructional designer is what are the objectives of the program? Designers must ask the program provider and themselves this question again and again, until they have produced a clearly written paragraph about the learning objectives or outcomes that are agreed on by major stakeholders.

If the program is essentially a traditional type of knowledge and skill transfer, then the designer can begin writing cognitive or behavioral objectives directly, such as an objective that defines what the learners should know and be able to do better or differently as a result of the learning experience. This type of objective is usually worded, “By the end of the learning program, the participants will know or be able to do or have a changed attitude about [a specific thing or issue].”

The learning objectives can be written at two levels: general goals and specific objectives. The goals are the organizer’s intentions and purposes, which are expressed as a general statement, whereas specific cognitive and behavioral objectives are measurable changes in knowledge and skills of learners or deliverable outputs from the learning process.

The example in box 8.1 is from the *GDLN Toolkit* (GDLN 2005). It shows the difference and connection between goals and objectives. The toolkit also provides a detailed guide and supporting material to enable designers to learn how to write learning objectives.

More and more developmental learning programs are including new and innovative learning processes in their design, such as knowledge sharing through communities of practice and collective collaboration (*wikis*). And more demands are being placed on comprehensive programs to achieve multiple development goals. In such cases, a higher-level goal or output of the program must be defined before describing the technical learning objectives.

If designers think about the program as a learning product in which participants invest their money, time, and effort, then the learning objectives are features and results that the supplier promises to deliver to the consumer.
by the end of the learning process. Participants will evaluate the program against these promises. From that point of view, the learning objectives also drive the learning content and evaluation criteria. The decision on how to define and write the objectives of the learning program is, therefore, of major importance. It is best not to promise more than can be delivered, because the program will be evaluated on the basis of those promises.

Select the type of blend and major technology or media

The three major GDLN blended delivery modalities—face-to-face, VC, and e-learning—are described in paper 4. The program designer should decide on the type of blend according to key aspects of the program. Many factors will influence the selection of the type of blend and technology, but audience, learning content, and the dominant learning process are the most important ones.

The learning content aspect influences the blend and technology decision from the beginning. If the knowledge is (a) explicit (well developed and clear), person independent (can be used by individuals without reference to anyone or anything else), and codifiable, which means the knowledge can be assembled, classified, and presented in a usable form; (b) stored in print or electronic format for later dissemination and transfer; and (c) reusable for a large audience over a relatively long period, then developing e-learning material is worthwhile. If the topic or knowledge is still in the developing stage and is not well defined and codified, or if it is tacit knowledge (knowledge that is implied and not necessarily described in words or clearly expressed), then development of e-learning material is not suitable. In such cases, VC-based dialogues or seminars are quicker, easier, and cheaper to organize and are more suitable.

The program designer needs to know the audience. Where are they? Can they gather in one place or go to a GDLN center close to their office or home? The proper type of blend should accommodate the situation by using the right technology to bridge the difference of time and distance. Another key question about the audience is, who are they? Are they mass market, schoolchildren, or adult learners? What is their accessibility, preference, and skill level as far as technology is concerned? The size of the audience also matters (GDLN Toolkit, Module 6).

The type of learning process, which is described in figure 1.1 in paper 1, is also an important consideration. All three types of blend could be used for a single-source knowledge dissemination process, depending on factors of audience and type of knowledge. Videoconferencing is a top choice for broad and quick knowledge sharing. An excellent example is the global knowledge-sharing initiative on avian and human influenza, organized by the World Bank East Asia and Pacific region.

An e-discussion forum is an ongoing and asynchronous tool for knowledge sharing that has no limitations on the geographic distribution of participants. The GDLN Secretariats and World Bank International Multimedia Center have set up a special space for GDLN to use Dgroups, which is an online home for groups and communities interested in international development (http://www.dgroups.org/).

When the GDLN is used to conduct VC sessions, best practice is to design and conduct a local face-to-face session before and after the VC, thereby taking advantage of the presence of participants in the GDLN centers. The GDLN training coordinator and local facilitator can add direct human contact for participants and build a stronger sense of a learning community.

The appropriate selection and mix of technology and media should reach the participants
targeted, carry out the information and knowledge transmission smoothly, and support the communication and learning process adequately. For participants and learners, that mix of technology and media offers choices and flexibility and is user friendly. For learning event organizers, it should be reliable (low risk and with backup options) and cost-effective.

Additional Design Decisions

To design a quality blended learning program, more design decisions need to be made, such as selecting and developing learning materials, designing interactivity, and providing learning support and facilitation.

Select and develop learning materials

Appropriate and good-quality learning material is an important element of a learning program that supports and fits the target audience’s needs. Close collaboration between subject matter experts, instructional designers, and multimedia specialists is required to select or develop suitable learning material for a program. The program provider normally takes responsibility for selecting or developing learning material because GDLN centers do not have in-house subject matter experts on various development topics. However, some guiding principles can be useful:

1. **Less is better: be selective with material.** A common mistake is to give too much information and material—an easy thing to do in a world of information explosion. The selection of contents and material should ensure that learning objectives can be achieved. It is important to ask what the “must know” contents are to ensure that objectives can be achieved and to differentiate between the “must know” and the “good to know” content and material.

2. **Create layers of information.** To meet the needs of participants who have different education backgrounds and work experience, information and knowledge can be provided in layers. The first layer is the “must know” and general information and knowledge; the second layer can offer more detailed coverage of the first layer. In electronic versions, the layers can be created through hotlinks. To meet different learning needs of diversified participants, extra, “good to know” information, such as relevant links and reference readings, are also useful. They can be organized separately as optional resources.

Ensure interactivity according to needs and learning modality

Interaction is a vital part of any adult learning program. Even in the traditional face-to-face environment, active interaction is not easy to achieve. In distance learning, ensuring adult learner participation and encouraging active learning demands special design and implementation.

Depending on pedagogical choice, different learning situations may require different levels of interactivity, and thus different techniques and strategies may be used. For VCs, a question-and-answer session is most often used for timely clarification and to generate interaction between the speaker and participants. If more interactivity is desired, the following options can be used in various circumstances:

- A panel discussion can enhance understanding of issues because different perspectives and experiences are shared. The panel discussion is also useful for dealing with complicated or topical (“hot”) topics.
- Group presentations in VCs provide incentives to participants to do good group work and encourage action learning at each site.
This method is also a good way to encourage knowledge sharing among participating sites. However, the organizer needs to provide guidance in preparation and presentation to enhance quality and effectiveness.

- After the VC, group e-discussion and e-mail can be used for ongoing communication and interaction.

Various local activities will provide opportunities for more personal and in-depth interaction. The facilitator and organizer can use all kinds of interactive and participatory methods.

**Design learning support and facilitation**

The program provider and the hosting GDLN center need to identify what learning support and facilitation will be needed and to decide how best to provide both to participants. In general, support and facilitation can be divided into three categories: (a) training, administrative, and logistic support; (b) technical support; and (c) learning support and facilitation.

The challenge of providing learning support and facilitation in blended learning is how to deliver it to all participants at a distance. Most learning support and facilitation depends heavily on GDLN centers and local facilitators, who function like retailers and serve the consumer directly.

In paper 6, the roles and responsibilities of both hosting and participating GDLN centers are discussed. However, an overall arrangement needs to be designed and communicated to all parties involved. Most important, that arrangement should be set forth in a signed contract format with agreed business terms.

The facilitator is not a teacher in the conventional sense. He or she creates an environment that encourages learning and enables group members to learn from each other, to reflect on shared experience, and to develop the confidence to try new approaches to problem solving. The facilitator may use a variety of means to capture the learning of the members. Members may be asked to reflect on the nature of their interactions and on the implications of various actions in the learning process. The facilitator may intervene during the problem-solving process or may arrange a time at the end of each meeting for members to reflect on what they have learned. A critical aspect of the local facilitator’s role is catalyzing the learning process for participants at distant locations and creating an atmosphere in which learning is encouraged.

**Two Things to Keep in Mind: Implementation and Communication**

In designing a GDLN program, it is important to be mindful of two things: implementation and communication. Is the design such that the designer or others can later implement it? Is it feasible and manageable within the budget limitation, timeline pressure, and administrative capacity? How will the program design be communicated to other people? What measures are planned in making communications uncomplicated and clear for the many people involved in the program?

**Design a program that is manageable for implementation**

Technically speaking, the GDLN VC facility can link to its centers all over the world. However, the time zone difference from the center in Canberra and that in Washington, D.C., could be 14 hours (during spring and summer in the United States, when daylight saving time is in effect) to 16 hours (during summer in Australia, when daylight saving time is in effect). In the Microfinance Training of Trainers course, the time differences spanned a wide range: from 10:00 p.m. to
midnight in New York, where the course instructor was located, to 6:30 a.m. to 8:30 a.m. in Afghanistan, where participants were eager to learn. The course designer and organizer should consider whether people are willing and able to participate in programs that may take place at inconvenient local times. It is also important to be aware of national or religious holidays when planning multisite programs and to find dates when such events are not a barrier to participation.

In theory, learning materials can be distributed on a Web site or by e-mail. However, it is necessary to consider whether all participants can receive the material, especially if large multimedia files are sent as attachments. Participants should also not receive so much reading material that it becomes difficult and expensive for them to print the material and find time to read the material.

It is strongly recommended that design and implementation plans be kept simple and manageable. Instructional designers should always think carefully about how the program or learning activity will be implemented.

**Ensure effective communication**

Communication is critical in distance learning. In the design stage, communication focuses on major decisions related to program design, such as the needs and justification and the goals and objectives, as well as the distance learning approach and roles and responsibilities of each party involved.

A good communication design and plan are necessary to ensure effective communication. A program design file is recommended (see paper 9) to function as a communication tool among all stakeholders. A program brochure is useful in communicating with potential audiences and for recruitment of participants.

A common workspace will facilitate group work and help with record-keeping, as well as reducing workloads and ensuring coverage—especially if group e-mails are organized for members who contribute to program design.

In the implementation stage, communication focuses on coordination and team efforts, because many people in different locations need to work together to make the event happen as planned. Those tasks are more difficult when the event is conducted in real time, such as VCs linking multiple sites. Technicians at the Network Operational Center in Washington, D.C., and at each site need accurate booking information about the event to work together to meet all requirements from clients. Speakers need to know where and when to go to attend the event and whom to contact to get into the building. The organizer needs to get presentation material in advance and send it to all GDLN centers for printing and distribution. All speakers and the moderator need to know the order of communication flow and the time allocated for each agenda item in the program or event.

**Notes**

1 For more information about the initiative, visit http://go.worldbank.org/4G30VBZLW0.
2 Dgroups is a joint initiative of Bellanet, the U.K. Department for International Development, Hivos, the Institute for Connectivity of the Americas, the International Institute for Communication and Development, OneWorld, the Joint United Nations Programme on HIV/AIDS, and the World Bank.
A Three-Stage Process for Designing a Blended Learning Program

As discussed in paper 8, the design process for a Global Development Learning Network (GDLN) blended learning program involves decisions on many aspects of the program and requires a great deal of communication and coordination among stakeholders. Clear and organized work procedures and documentation are important for handling the collective decision-making process and pulling all elements of the program together in a systematic and consistent way. The authors of this paper recommend a three-stage design process on the basis of their practical experiences in designing GDLN blended programs.

Stage 1: Develop the Program Design File

A program design file is an effective tool for capturing systematic and accurate records of all decisions related to the program. It is not only a design tool but also a communication tool, and it can be used for discussion, consultation, and coordination among all stakeholders. It may be revised many times during the process of program design and preparation. A well-written program design file can be used for multiple purposes: design, delivery, communication, promotion, budget, contract, procedures, and so on. The concept paper can be used as a starting point in improving the design file, which contains the components included in the template in box 9.1.

Stage 2: Develop a Blended and Balanced Schedule

If the program or event has only one session, the design process can proceed directly to the next stage—that is, developing a running order in the case of a videoconference (VC) or developing a lesson plan or an agenda for a class or a conference. When a program has multiple sessions and lasts more than one day, a balanced schedule must be developed. In such cases, it is very useful to start with a daily schedule for each day of the program on one page or one spreadsheet. Such a schedule allows planners to get a picture of the entire event before getting into the details of specific sessions.
Box 9.1. Template for the Learning Program Design File

**Title, Sponsor, Date, and Venue**
- Give the program a clear title. Make the title brief, capturing the major contents and features of the program, and be creative to differentiate the program from other, similar programs.
- Make a list of all the sponsors or partner organizations that are involved with the program.
- Provide tentative dates and venues, if available.

**Introduction and Background**
- Provide the context of the program.
- Describe operational and learning needs and stress the priority status of the program to show justification.
- Describe the program. A description of the proposed program should be the last paragraph in this section.

**Goals and Objectives**
- State the goals of the program. Goals are a general statement of what is to be achieved through the program.
- List the objectives of the program. Objectives are specific operational or learning outputs and outcomes of the program. In the case of a learning program, the objectives are normally expressed as behavioral outcomes, such as, “After completion of the program, participants will be able to…."

**Target Audiences**
- Provide a profile of the target audience (job position, level and responsibilities, types of organizations participants work for, education level, and so on). Identifying a common training or learning need is another way of defining target audiences.
- Specify the location of the audience and the total number of people to be reached.

**Teaching Method (Including Language and Translation)**
- Specify the major delivery mode of the program and the technologies that will be used.
- If delivery is by distance learning, specify where the sites are and how they will be organized and connected. Describe the combination of various technologies to be used.

**Content Outlines**
- List the titles of modules and the subtitles of major topics in each module. (This information may not be available in the proposal stage.)

**Learning Materials**
- Provide the format of the materials, such as print, online, CD-ROM, or cassette tape.
- Describe how to obtain the materials and how much they cost.

**Program Schedule**
- Provide a schedule for the program, which might be tentative at the proposal stage.
- Consider public holidays and time differences of the participating countries when scheduling videoconference sessions.

**Evaluation and Certification**
- Describe how, when, and by whom the program will be evaluated.
- State whether a certificate is available upon completion of the program and who will present it.

**Partners**
- Provide information about each partner.
- Describe the roles and responsibilities of each partner.

**Budget**
- Give an estimate of the major expenses.
- State who will pay for what and how payment will be made.

*Source: Author.*
The daily schedule builds on and balances many elements that influence course or program structure and takes into account questions such as the following: Will the program be conducted on consecutive days, or will it be conducted once a week or once a month over a longer time period? Will participants travel to the venue or stay together in a hotel during the event? What is the preferred or convenient daily schedule for participants, such as starting time, ending time, and lunch break? The answers to these questions can be used to produce a basic framework of the schedule, which is step 1 of the scheduling process.

The schedule organizes daily learning activities down to the session level, on the basis of the major elements of blended learning, such as VC sessions, self-study, and local group activities. Some questions to ask at this stage of planning include the following: What time, location, and sequence best fit the learning needs? Is it easy to implement the schedule from the point of view of logistics? Is the schedule convenient for most participants and resource people? Is there some flexibility for later adjustment? Is the schedule simple enough to allow for clear communication to all parties involved? Step 2 is arranging sessions within the schedule’s framework by balancing considerations of sequence of instruction, workload of participants, availability of resource people, and feasibility of VC time among different time zones. The balance and combination of real-time events and locally arranged activities and the smooth union of both should also be considered.

The example in box 9.2 is from the World Bank Institute course “World Trade Organization (WTO) and China’s West: Post WTO Challenges and Opportunities,” which was conducted for officials in the western provinces of China in 2002 on four consecutive days. Participants stayed in two major venues: the campus of the National Accounting Institute in Beijing and a hotel close to Ningxia University in Ningxia province. The course was a VC-based blended distance learning course. The framework of the schedule divided each day into four sections, with tea breaks and a lunch break. The starting time and ending time were agreed on with local organizers to fit with local needs.

Within the framework of the schedule, the most important events should be filled in first, including the opening, closing, and major VC sessions. Later, when more information about the content and speaker for each session is available, the schedule can be filled in with more details. It is easier to see the entire picture if the schedule is formatted to fit on one page.

In the example in box 9.2, speakers for the course were in Washington, D.C.; Geneva; and Beijing. To be feasible, the VC between Washington, D.C., and Beijing had to be in the morning Beijing time and the VC between Europe and Beijing could be arranged in the afternoon Beijing time.

Stage 3: Develop a Running Order for the Videoconference Session

A running order is a plan for a VC session that specifies a detailed flow of dialogue. It is similar to a meeting agenda or a teacher’s lesson plan in face-to-face classroom settings but demands greater detail and more precise timing.

In addition to providing a detailed plan for the VC session, a well-developed running order has two other functions. First, it is used to create and implement an interactive learning experience. The VC equipment is voice activated; it allows only one person to speak at a time. Therefore, the order of speakers among participating sites must be determined in advance.
Box 9.2. Sample Schedule for WTO and China’s West: Post WTO Challenges and Opportunities

Date: May 13–16, 2002
Place: Beijing and Ningxia, China

Develop a Blended and Balanced Schedule: Step 1

<table>
<thead>
<tr>
<th>Beijing time</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
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</thead>
<tbody>
<tr>
<td><strong>Morning:</strong></td>
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<tr>
<td>9:00 a.m.–11:00 a.m.</td>
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<tr>
<td><strong>Tea break</strong></td>
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<td>11:00 a.m.–11:15 a.m.</td>
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<tr>
<td><strong>Morning:</strong></td>
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<td>11:15 a.m.–12:00 p.m.</td>
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<td><strong>Lunch break</strong></td>
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<tr>
<td>12:00 p.m.–2:00 p.m.</td>
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<tr>
<td><strong>Afternoon:</strong></td>
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<tr>
<td>2:00 p.m.–4:00 p.m.</td>
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</tr>
<tr>
<td><strong>Tea break</strong></td>
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</tr>
<tr>
<td>4:00 p.m.–4:15 p.m.</td>
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</tr>
<tr>
<td><strong>Afternoon:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:15 p.m.–5:30 p.m.</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Develop a Blended and Balanced Schedule: Step 2

<table>
<thead>
<tr>
<th>Beijing time</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Morning:</strong></td>
<td>Opening and Session 1: VC with Washington, D.C.</td>
<td>Session 3: VC with Washington, D.C.</td>
<td>Session 5: VC with Beijing</td>
<td>Session 7: VC with Washington, D.C.</td>
</tr>
<tr>
<td>9:00 a.m.–11:00 a.m.</td>
<td></td>
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</tr>
<tr>
<td><strong>Tea break</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>11:00 a.m.–11:15 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Morning:</strong></td>
<td>Local activity: Video viewing and discussion</td>
<td>Local activity: Video viewing and discussion</td>
<td>Local activity: Video viewing and discussion</td>
<td>Local activity: Discussion</td>
</tr>
<tr>
<td>11:15 a.m.–12:00 p.m.</td>
<td>“WTO and Enterprises,” by Hai Wen</td>
<td>“WTO and the Automobile and Steel Industry,” by Feng Fei and Liu Jinghai</td>
<td>“Antidumping Cases against Chinese Firms,” by Xiaolin Wang</td>
<td>“WTO and the West”</td>
</tr>
<tr>
<td><strong>Lunch break</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>12:00 p.m.–2:00 p.m.</td>
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</tr>
</tbody>
</table>

(box 9.2 continued next page)
Participants cannot ask questions during a speaker’s presentation by raising hands or simply jumping into a discussion. Rather, the interactive aspect of a VC session needs to be designed and built into the running order. Normally, each site will be given equal time for asking questions or contributing to the discussion. If there is more than one opportunity for interaction, the order of speaking can be set up alphabetically by country name or in reverse alphabetical order.

Second, the running order is a communication tool that lets all relevant parties know who is doing what at what time so that everyone can seamlessly contribute and coordinate with others. Some program designers make their running order relatively simple—mainly listing speakers’ names and time allocations. In such cases, a participant has to read the program file or brochure to understand the event. Ideally, the program designer should make a comprehensive running order that includes all key information about the program so it can be a stand-alone file.

The running-order template should include the following:

- Title of program and subtitle of VC session.
- Date and time. Washington, D.C., date and time are used for booking, and the local date and time at each site are provided for the convenience of all participants.
- Name (normally the country name) of all participating sites.
- Name (sometimes with job title), organization, and location of moderators and speakers.
- Names of important people at each site, if necessary for political or diplomatic purposes.

Box 9.3 provides an example. It can be used as a template and modified to meet particular situations and needs.
### Box 9.3. Sample Videoconference Running Order

**“Commercial Microfinance,” by Heather Clark**

**Running Order of VC 1**

**Third Microfinance Training of Trainers**

<table>
<thead>
<tr>
<th>Sites</th>
<th>China (Beijing, China Development Bank, Chongqing, Guizhou, Shaanxi); India (Teri); Japan; Philippines; Sri Lanka; and Vietnam development learning centers and Pakistan World Bank Office</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heather Clark</td>
<td>will present from International Labour Organization, Turin, Italy</td>
</tr>
<tr>
<td><strong>Date</strong></td>
<td>August 3, 2006, Thursday</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td><strong>Locations</strong></td>
</tr>
<tr>
<td>Washington Network Operational Center</td>
<td>1:00 a.m.–4:00 a.m. (daylight savings time)</td>
</tr>
<tr>
<td>Italy</td>
<td>7:00 a.m.–10 a.m.</td>
</tr>
<tr>
<td>Pakistan</td>
<td>10:00 a.m.–1:00 p.m.</td>
</tr>
<tr>
<td>India and Sri Lanka</td>
<td>10:30 a.m.–1:30 p.m.</td>
</tr>
<tr>
<td>Vietnam</td>
<td>12:00 p.m.–3:00 p.m.</td>
</tr>
<tr>
<td>China and Philippines</td>
<td>1:00 p.m.–4:00 p.m.</td>
</tr>
<tr>
<td>Japan</td>
<td>2:00 p.m.–5:00 p.m.</td>
</tr>
<tr>
<td><strong>Participants</strong></td>
<td>All training of trainers and regular participants of the course</td>
</tr>
<tr>
<td><strong>Moderators</strong></td>
<td>Jiping Zhang, Tokyo Development Learning Center, Tokyo, and Setboonsarn Sununtr (Sunny), Asian Development Bank Institute, Tokyo</td>
</tr>
<tr>
<td><strong>Opening remarks</strong></td>
<td>Peter McCawley, dean of Asian Development Bank Institute, Tokyo, and Ryu Fukui, manager of Tokyo Development Learning Center, Tokyo</td>
</tr>
<tr>
<td><strong>Speakers</strong></td>
<td>Heather Clark, international consultant on microfinance, International Labour Organization, Turin, Italy</td>
</tr>
</tbody>
</table>

**Agenda**

1. **Course opening and introduction** 35 minutes
2. **Speaker introduction** 5 minutes
3. “Commercial Microfinance,” by Heather Clark 45 minutes
4. **Break** 10 minutes
5. **Questions and answers** 40 minutes
6. “Training of Trainers Tips,” by Heather Clark 20 minutes
7. **Questions and answers** 20 minutes
8. **Conclusion and closing** 5 minutes

<table>
<thead>
<tr>
<th>Time (Tokyo)</th>
<th>Length</th>
<th>Speaker</th>
<th>Action, event, and topics</th>
<th>Visual aids and translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00</td>
<td>60 minutes</td>
<td></td>
<td>Test of connection</td>
<td></td>
</tr>
</tbody>
</table>

*Internal hour: VC session begins at 14:00 (Tokyo time)*

(box 9.2 continued next page)
<table>
<thead>
<tr>
<th>Time</th>
<th>Duration</th>
<th>Speaker</th>
<th>Task Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00</td>
<td>5 minutes</td>
<td>Jiping, Tokyo</td>
<td>Welcome and VC agenda</td>
</tr>
<tr>
<td>14:05</td>
<td>10 minutes</td>
<td>Development learning centers</td>
<td>Introduction of participants (new tutors and training of trainers participants) at each site</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>VC begins at 14:00 from Tokyo</td>
</tr>
<tr>
<td>14:15</td>
<td>4 minutes</td>
<td>Peter, Tokyo</td>
<td>Opening remarks from Asian Development Bank Institute</td>
</tr>
<tr>
<td>14:19</td>
<td>4 minutes</td>
<td>Ryu, Tokyo</td>
<td>Opening remarks from Tokyo Development Learning Center</td>
</tr>
<tr>
<td>14:23</td>
<td>12 minutes</td>
<td>Jiping, Tokyo</td>
<td>Explanation of the blended distance learning approach</td>
</tr>
<tr>
<td>14:35</td>
<td>5 minutes</td>
<td>Sunny, Tokyo</td>
<td>Introduction of speaker Heather Clark</td>
</tr>
<tr>
<td>14:40</td>
<td>45 minutes</td>
<td>Heather, Turin, Italy</td>
<td>Presentation on “Commercial Microfinance”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Slides 1–19</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Break of 10 minutes (please prepare questions)</strong></td>
</tr>
<tr>
<td>15:35</td>
<td>40 minutes</td>
<td>Sunny, Tokyo</td>
<td>Questions and answers and discussion</td>
</tr>
<tr>
<td>16:15</td>
<td>20 minutes</td>
<td>Heather, Turin, Italy</td>
<td>Presentation on “Training of Trainer Tips”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Slides 20–30</td>
</tr>
<tr>
<td>16:35</td>
<td>20 minutes</td>
<td>Sunny and Heather</td>
<td>Questions and answers, comments, and discussion</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>China, India, Japan, Pakistan, Philippines, Sri Lanka, Vietnam</td>
</tr>
<tr>
<td>16:55</td>
<td>5 minutes</td>
<td>Sunny, Tokyo</td>
<td>Conclusion and closing</td>
</tr>
</tbody>
</table>

**VC session will be closed at 17:00 (Tokyo time)**

**Notes:**
1. Please inform your participants of the address of the development learning center.
2. Please instruct the moderator and presenters to come to development learning center sites 30 minutes before the session. Other attendants should arrive 15 minutes before the session opens.
3. A handout of Microsoft PowerPoint presentations should be distributed to all participants before the VC.
4. Please ensure that your technical staff is in the studio to turn on equipment for testing one hour before the session.
5. During the session, please always mute your microphone when not speaking.
6. Contact at Tokyo Development Learning Center: Ms. Naomi Koike (adbitdlc@worldband.org), tel: +81 3 3597 1333.
7. Washington Network Operational Center, tel: +1 202 473 7000

**Source:** Author.
References
