Uses of the Cell Phone for Education in the Philippines and Mongolia

Felix Librero\textsuperscript{a}, Angelo Juan Ramos\textsuperscript{b*}, Adelina I. Ranga\textsuperscript{c}, Jerome Triñona\textsuperscript{b}, and David Lambert\textsuperscript{d}

\textsuperscript{a}University of the Philippines Open University, Los Baños, Philippines; \textsuperscript{b}Molave Development Foundation Inc., Manila, Philippines; \textsuperscript{c}Division of City Schools, Manila, Philippines; \textsuperscript{d}English for Special Purposes Foundation, Mongolia

The cell phone, now the most widely used medium in Asia, has major educational implications. Most users, however, do not realize the cell phone's potential for education, nor even for the communication functions for which it was originally designed. Most educators still see the computer and the cell phone as unrelated devices, and the tiny cell phone more as a personal accessory, especially for young people. With falling prices and increasing functionality, however, it is virtually certain that not too far in the future all of the world’s students will have a cell phone. This is sufficient reason and motivation for educators to explore the possibility of making the cell phone an important tool in the educational systems of developed and developing countries. This article describes the experience of two major projects that are studying the potential of cell phone and short message service (SMS) techniques for formal and nonformal education in the Philippines and Mongolia. The studies have yielded positive reactions from students and trainees about the potential of these techniques, and are suggesting design and logistical principles for use in educational cell phone implementation.

Introduction

One and a half billion people are walking around with powerful computers in their pockets and purses: cell phones providing the primary means of social communication (Table 1). Today's high-end cell phones have the computing power of a mid-1990s personal computer, while consuming only one one-hundredth of the energy. The cell phone feature known as “texting”—sending and receiving messages via the short message services (SMS) feature on cell phones and Smartphones (PDA and cell phone hybrid)—has become a worldwide phenomenon.

\textsuperscript{*}Corresponding author. Molave Development Foundation Inc., 4336 Montojo Street, Makati City, Metro Manila 1201, Philippines. Email: ajramos@molave.org

ISSN 0158-7919 (print); 1475-0198 (online)/07/020231-14
© 2007 Open and Distance Learning Association of Australia, Inc.
DOI 10.1080/01587910701439266
Table 1. Projected global mobile penetration levels

<table>
<thead>
<tr>
<th>Continent (%)</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Europe</td>
<td>101.4</td>
<td>106.3</td>
<td>108.9</td>
<td>110.3</td>
</tr>
<tr>
<td>North America</td>
<td>67.6</td>
<td>74.0</td>
<td>79.4</td>
<td>83.7</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>63.6</td>
<td>74.3</td>
<td>79.3</td>
<td>82.8</td>
</tr>
<tr>
<td>Latin America</td>
<td>43.3</td>
<td>50.7</td>
<td>53.3</td>
<td>55.0</td>
</tr>
<tr>
<td>Middle East</td>
<td>38.0</td>
<td>45.4</td>
<td>50.9</td>
<td>54.5</td>
</tr>
<tr>
<td>Asia/Pacific &amp; Japan</td>
<td>22.5</td>
<td>26.2</td>
<td>30.0</td>
<td>33.9</td>
</tr>
<tr>
<td>Africa</td>
<td>21.0</td>
<td>27.3</td>
<td>32.2</td>
<td>36.0</td>
</tr>
</tbody>
</table>


During the 5 years since the educational use of cell phones first became a talking point, discussion of mobile learning (m-learning) via telephony has shifted from theoretical issues to actual project implementation. Valuable lessons have been gained from early educational experiences with the cell phone (Atthewell, 2005; Kukulska-Hulme & Traxler, 2005; Stead, 2005). For example:

1. M-learning fulfills functions that other educational methods cannot fulfill. It empowers and engages the learner. The learner is more comfortable engaging in discussions of private and personal topics using a mobile device than via traditional educational methods.

2. M-learning methods are best used as part of a blended learning strategy. Mobile devices are most effective when combined with group activities, paper-based materials, other information and communication technologies (ICTs), and traditional educational activities.

3. M-learning is not a single solution but a collection of pieces to be fitted to specific learning needs. It is a collection of technologies in the teaching and learning tool box. Other tools include text messaging, audio-based technologies such as the iPod and MP3 players, learning modules on PDAs, materials from camera phones, and online materials such as blogs.

4. Mobile ICTs are not just for one-way teaching but for two-way communication, collaboration, and creation. This mix is particularly useful and effective for those who have dropped out of school.

5. M-learning can lead to more sophisticated uses of technology. Individuals who have dropped out of school or are socially disadvantaged often lack the confidence to develop basic ICT skills. Following exposure to m-learning tools, they seek additional information and skills about other ICT-based tasks such as word processing and Internet use.

6. M-learning involves minimal technical sophistication since the ability to use the technology is learned “on the job.” Teacher and students can learn the use of m-learning techniques together. Practice makes perfect.

Here is a typical cell phone learning situation. A student may be on the bus from home to work, business, or school. Before getting off, there is enough time to take
out the cell phone and to key in the access code. This typically yields an auto-
response asking about the information requested. The user ticks “m-learning,” for
example, and is presented with a selection of topics. He or she then ticks the topic of
choice and sends the request. The next message received is a set of questions requir-
ing responses. After this brief diagnostic test, the result is presented. If the user has
passed the diagnostic test, s/he is congratulated; otherwise, the user is encouraged to
read up on the topic. The title is given of a pocket-sized print module on the topic,
costing 50 pesos (US$1), and information is presented on how to obtain it from the
University of the Philippines Open University (UPOU). After reviewing the print
material, the learner can decide whether or not to retake the diagnostic test. If the
test is passed, a certificate can be requested from UPOU. Mobile modules have been
developed in a wide range of subject areas.

To provide such functions, a wide range of advanced functions is available, for
example, multimedia messaging services (MMS), Java applications, Bluetooth for
establishing remote connections, and General Packet Radio Service (GPRS) for fast
mobile Internet connections. Operators, however, fall short of delivering educational
content to their millions of subscribers.

A number of major m-learning projects have been undertaken in Southeast Asia.
In Thailand, the cell phone has been shown to be effective as a means of testing
student performance (Whattananarong, 2006). It was found that students who took
tests by mobile methods performed comparably with students who did so by conven-
tional methods. At UPOU, SMS-based mobile courses are being offered in formal
sector English, math and science education. SMS is used in the Text-2-Teach
program supported by the Philippines’ Department of Education, though it only
goes as far as providing a means for educators to request educational content to be
delivered to them by satellite television, and not by SMS. The Philippines, in fact,
has been dubbed the “texting capital of the world” owing to the massive daily
volume of its text transmissions by high- and low-income groups alike: students,
daily wage earners, market and ambulant vendors, drivers of passenger vehicles,
barbers, beauty parlor workers, domestic helpers, and, of course, criminals! Suplido,
Bonito, Escubio, and Mariano (2003) and Librero (2006) have discussed four types
of educational cell phone usage:

1. The cell phone and SMS is used as a course delivery tool, even to the point of
being the primary medium for interactive learning of course content, as will be
demonstrated in this article.

2. SMS is also used to give lecture alerts (changes of schedule), schedules of focus
group discussions, examination reminders, deadlines for projects and papers, new
courses, grades, schedules for consultation, availability of library resources, and
so on. These activities can replace extensive face-to-face interactions between the
teachers and students, as in consultations about course requirements.

3. In extracurricular contexts, student groups and organizations use the cell phone
to promote activities such as job fairs, social affairs, and discount opportunities,
and for text-voting during student council elections.
4. In administrative contexts, the following details are readily available over the phone: university admissions, fees, university-wide activities, availability of scholarship grants, marketing campaigns, study surveys and policies, alerts to parents and guardians on students' performance, and emergency information such as bad weather alerts and suspension of classes. Mobile methods make such information readily accessible.

While positive aspects of SMS technology favor good design and usage principles such as these, the technology currently has limitations. Advanced functions such as face-to-face interaction are available only on multimedia (MMS), 3rd-Generation cell phones, still relatively rare in Asia. Most users are restricted to basic 1st-Generation (1G) cell phones, which have small screens and keypads; some of them have monochromatic screens only; text messages are usually limited to 160 characters; point-and-click navigation options are not provided; and the acceptability of their text spelling and grammar is questionable in academic settings. Since many-to-many points of interaction are rarely possible on 1G phones, these tools are currently more suited to independent learning activities. This situation is likely to change as more advanced cell phone models become generally accessible.

The next section discusses the early efforts in m-learning development at UPOU, and the lessons learned.

**UPOU’s Uses of the Cell Phone in Formal Education**

When one sends SMS messages, one is communicating asynchronously, so that before the message is actually sent it is possible to reflect on it. One can reply to an SMS message at any time, at one's convenience, privately and even anonymously. SMS technology therefore caters to cultural tendency of Filipinos to be nonconfrontational in their communication actions. In view of these positive features, it is natural to assume that SMS technology may be useful in information dissemination and mass education. This is the rationale behind the m-learning project launched by UPOU in February 2003, in collaboration with SMART Communications, Inc., a major cell phone service provider. Called TXT 700UPOU, the project uses SMS technology to deliver educational materials to people "on the go" (Suplido et al., 2003). SMART Communications, Inc. has been responsible for providing the delivery system and marketing the TXT 700UPOU project through text broadcasts to its subscribers.

The UPOU m-learning program uses SMS modules in the context of a multimedia package including pocket-sized booklets. In developing these packages, the University's instructional designers have been guided by the following general criteria:

1. **Accessibility.** Course materials are designed for use by a diverse audience, with no restriction placed on who can be allowed to take the courses. The broad demographics of cell phone users are taken into account, as well as the technology's accessibility to groups previously excluded from courses.
2. **Interactivity.** Points of automated interaction between the teacher and user are created for drill and practice, and for personal interaction in feedback and consultation sessions.

3. **Usefulness.** Mere assumptions of the materials' usefulness are not enough to ensure that the user will seek out the information. The information must be presented in an appealing manner in order to attract the learner's attention and interest.

4. **Unobtrusiveness.** Teaching and learning episodes are delivered in short capsules so that the learner will regard them as part and parcel of normal activities.

5. **Immediacy.** Instant feedback, whether automated or manual, is encouraged wherever possible.

6. **Adaptability.** The learner is allowed to proceed at his/her own pace and can skip or repeat sections of the module depending on specific needs.

7. **Ease of use.** Complex menus and commands are avoided.

8. **Privacy.** The learner maintains personal privacy throughout the program, to avoid the embarrassment of nonperformance, and to minimize fear of making mistakes in public.

9. **Suitability.** To maintain continuing interest, advances in mobile communications and SMS technology are harnessed.

In practice, the above general principles have translated into nine specific SMS design principles:

1. Authentic communication should be achievable. SMS technology must be able to provide service with no access barriers, no training necessary, faster response times, and with automated responses from tutors if necessary. In addition, learners should find it easier to ask or respond to questions through texting.

2. The cell phone should be personally owned and not shared with someone else. Learning can take place outside work hours and during “unproductive” work times. The learner should not be tied down by the need to access the technology, which should be readily adapted to people with special needs. The technology’s novelty should be used to provide a motivational stimulus for learners.

3. Course topics should be identified with popular interest value, at least until the students are used to using the cell phone in their studies. The UPOU project designers decided to create SMS-based modules for topics including mental health, English idioms and spelling, healthy lifestyle, nutrition, physical exercise, smoking cessation, and stress management.

4. The SMS modules should be designed to include learning objectives, units of instruction leading to the achievement of these objectives, and assessment measuring achievement of the objectives.

5. The simple question-and-answer format of SMS methods should be used to deliver pre-test materials, so that learners and teachers can assess prior knowledge.

6. Post-tests of achievement should be developed and administered, also using SMS delivery methods where appropriate.
7. SMS methods should afford the students opportunity for reflection. The learner should be able to take time to respond to the questions and issues raised. A feature of SMS that seems to be a limiting factor is the number of text characters that can be transmitted simultaneously. In fact, this constraint can force the learner to prioritize the information to be included in messages, and may be predicted to promote higher-order thinking.

8. Handy, small-size manuals should be printed accompanying the cell phone modules, for the learner to study at his/her own pace. These refer to other modules that discuss the subject matter in more detail.

9. Learners should be encouraged to learn more about the topics, and to test their knowledge on particular topics, because they will find the information useful in the future. They should be informed of further modules for this purpose.

Lessons from the UPOU Project

In general, individuals use the cell phone for purposes other than education, and the discovery of educational applications for the cell phone seems to have been unplanned and unanticipated. Getting users interested in educational cell phone content depends on the creativity of the instructional designers. A user must not sense an attempt to "lecture," but should find the content engaging in its own right. This must be achieved by employing treatment and instructional design techniques that are intrinsically appealing. The interactive feedback aspect of SMS must be carefully used for this purpose. Appropriate feedback methods have the potential to generate interest in educational topics, and to increase the likelihood that users will seek information voluntarily. Broadcast SMS messages are also effective in educational contexts just as in public information campaigns, even when the initial messages are received passively rather than sought actively. The recipients' subsequent communications are dictated by the impact of the initial information. The user who receives appropriate initial information is more likely to seek more of the same.

It is interesting to note, however, that texters are currently willing to spend money for messages that they forward to friends, though less willing to spend to access knowledge that they need to study. The current lack of public awareness of the cell phone's education options is a major problem in this respect, and there is a serious need to promote SMS m-learning projects to the public as more than just a tool for personal communication and entertainment. Another problem is that, since SMS activities cost money, users are likely to terminate them as soon as they find them unenjoyable. The TXT 700UPOU project identified specific technical issues that need to be addressed in order to overcome these problems.

For example, course developers, instructional designers, tutors, and learners are currently restricted to designing their questions and responses to the 160-character cell phone limit, and there is a need to harness the strengths of multimedia cell phone messaging. If designed correctly, these could address learners' multiple intelligences by, for example, providing pictorial messages to illustrate mathematical concepts.
for visual learners. In-house technical support capability is essential, especially if programming support is not provided by the telephone company (telco) selected as partner in the project. The telco needs to provide reliable, round-the-clock service, whereas the company used in the original UPOU project merely provided infrastructure and some marketing support. UPOU’s role was to develop and program the materials for SMS delivery. In its first year, the project received 9,000 inquiries. This is rather fewer than expected, which may be due to flawed project marketing. Many aspects of the project need to be improved, both by the University and telco.

The following study is pursuing these questions further, specifically in relation to the feasibility of using SMS techniques in nonformal education.

The Cell Phone’s Potential in Nonformal Education

The second study reported in this article is being sponsored in 2005–2008 by the International Development Research Centre (IDRC) to examine public awareness and design aspects of SMS methods in nonformal educational contexts. The project seeks answers to these questions:

1. How feasible is it to use SMS for nonformal distance education (DE)?
2. What are the factors that motivate or hinder people in using SMS for DE?
3. What are the best marketing and instructional design strategies for promoting, attracting, and sustaining SMS-enabled DE programs?

The lead research agency in the project is the Molave Development Foundation Inc. (MDFI), working with the Alternative Learning Services (ALS) of the Philippines’ Department of Education. The MDFI has conducted a wide range of community development and multimedia activities, most recently in a IDRC-funded project on “ICT and Distance Learning for Water, Hygiene and Sanitation” (Ramos, 2006). In that context, the MDFI’s staff developed interactive multimedia learning modules for health education and hygiene promotion, and conducted activities such as seminars and training-of-trainers workshops to develop the capabilities and knowledge of the project’s stakeholders. The Foundation also has a panel of experts for consultation in relation to research design, database systems development and management, technical writing, and instructional design. In an effort to draw international comparisons and conclusions, the MDFI researchers are collaborating with two organizations in Mongolia: the English for Special Purposes Foundation (ESPF) and the Health Sciences University of Mongolia (HSUM), both based in Ulaanbaatar. Launched in 2005, the Philippines section of the project has now completed its major initial activities.

Public Survey of Cell Phone Appeal

The first stage in the educational SMS research and development project was a baseline survey of public attitudes to the cell phone medium. The survey focused on students’ learning preferences, cell phone usage, and texting habits. A sample
comprising 123 ALS students from the six districts of Manila participated in the survey by means of questionnaires administered through the Teacher Community Coordinators of ALS. The data were collated and analyzed using *Epi Info 6.0* and *Microsoft Excel*. The sample comprised males (52%) and females (48%). The ages of those surveyed ranged from 12 to 48, with the mean age of males being 19 and that of females being 19.3. The weekly income of the respondents’ families is shown in Table 2, and the sources of family income are shown in Table 3. The educational levels of the respondents are shown in Table 4. Their access to cell phones is indicated in Table 5.

As Table 4 shows, many of the respondents had dropped out of formal secondary education. The largest proportion (36%) indicated that financial factors were responsible for this. A further 20% responded that they cannot return to formal studies because their need to work leaves them no time to study, whereas 25% said that they stopped attending school because they wanted to spend more time with friends. When asked if they would be interested in nonformal training using SMS methods, 80% of the sample said that they would, and, as shown in Table 5, everyone in the sample indicated that they have the necessary access to one or more cell phones. The majority (81%) allocate at least half of their prepaid cell phone credits to SMS usage already, and 28% allocate over 70% of their credits to SMS. Most respondents stated that they would be willing to set aside a portion of their load credits to learning through SMS. Sixteen percent stated they would not, and 3% were unsure. When asked which subjects they would be interested in learning via SMS, the male respondents indicated a preference for math (20%) over English.

### Table 2. Weekly family income

<table>
<thead>
<tr>
<th>Income range (weekly)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>550 pesos or more</td>
<td>49</td>
</tr>
<tr>
<td>250–549 pesos</td>
<td>7</td>
</tr>
<tr>
<td>Less than 250 pesos</td>
<td>6</td>
</tr>
<tr>
<td>Not known</td>
<td>38</td>
</tr>
</tbody>
</table>

*Note. Number of respondents in sample = 123.*

### Table 3. Sources of family income

<table>
<thead>
<tr>
<th>Occupation of breadwinner</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private or government employment</td>
<td>45</td>
</tr>
<tr>
<td>Self-employed with own business</td>
<td>18</td>
</tr>
<tr>
<td>Vendor</td>
<td>10</td>
</tr>
<tr>
<td>Driver</td>
<td>7</td>
</tr>
<tr>
<td>Unemployed</td>
<td>2</td>
</tr>
</tbody>
</table>

*Note. Number of respondents in sample = 123.*
(14%) and science (13%). The female respondents, on the other hand, preferred English (16%) to math (15%) and science (7%).

Focus Group Discussions: Philippines and Mongolia

Further evidence was obtained from a focus group discussion (FGD) on learning needs and SMS usage (March 2006), with five women and three men aged 19–30, all enrolled in the ALS Functional Literacy Programme (Philippines’ Department of Education). All participants owned cell phones and all were SMS users. The FGD was conducted at the ALS office in P. Gomez Elementary School, Manila. An MDFI facilitator led the discussion, gathering responses from the participants using a set of prepared questions.

Each of the FGD participants was asked to select five modules of interest to them, from the 292 existing secondary level modules offered by ALS. Their choices confirmed the overall study preferences expressed in the survey for critical thinking and problem-solving skills (i.e., modules on business math and practical applications of math), and for communication skills (modules on English speaking and grammar). The participants were in agreement that:

- SMS is a cheap way to communicate with friends and loved ones, and an important communication tool for work and business;
- learning through SMS could be useful to them;
- taking ALS courses through SMS would be convenient if it allowed learners to be with their family or at work while learning;

<table>
<thead>
<tr>
<th>Cell phones per household</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>36</td>
</tr>
<tr>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>4 or more</td>
<td>24</td>
</tr>
</tbody>
</table>

Note. Number of respondents in sample = 123.
people want to learn subjects such as math and English because they allow them to graduate from high school and to find better jobs; and

- transportation costs saved by SMS use could be reallocated to the cell phone credits used for learning.

No differences were observed between the opinions of men and women on these issues.

In expanding the project from the Philippines to Mongolia, further FGDs have been conducted with people who meet with foreigners in the course of their work and need to be able to speak and understand some English. A preliminary list was drawn up including taxi drivers, shop assistants, teachers, bank tellers, waiters, and hotel staff. The Philippines team decided to target bank tellers and waiters for investigation. A list of FGD questions was generated on two topics: (1) the participants' use of cell phones and familiarity with SMS text messaging; and (2) their need for English in their work, command of the language, and problems faced in learning it. Meanwhile, the Mongolian partner (HSUM) has used the same set of questions for two FGDs with doctors and nurses in Ulaanbaatar and Bayankhongor, a remote area of western Mongolia. The total sample in this round of FGDs has included 21 bank tellers, 20 waiters, and 20 doctors and nurses. It has been found that:

- the majority of the participants feel that their English is poor;
- there is a strong desire and motivation on the part of almost all of the participants to learn English;
- all agree that knowledge of English would help them in their work, and that a good command of English would improve their job prospects;
- bank tellers need English to communicate with foreigners and with the bank directors, most of whom are foreigners;
- learning English is difficult for many of them because of the cost of courses and conflict with their work schedules;
- the waiters and bank tellers need appropriate professional vocabulary and style, and social English;
- all the participants have cell phones;
- SMS messaging is very popular, because it is cheaper than regular phone calls;
- there is some resistance to sending SMS messages, because the keypad is difficult to use;
- the use of cell phones for personal reasons during work is banned for bank tellers and waiters; and
- the majority feel that it would be possible to learn English with SMS messaging as a key component of a course, and is attracted by the idea.

Planning the Project's Next Stage

In order to prepare the way for meeting the needs expressed in the survey and the FGDs, the MDFI has conducted a series of consultative meetings with teachers and
instructional designers from the ALS, and with research experts. The following issues regarding the preparation of SMS-based learning content have been raised for future reference.

**Information and content**
- How the use of SMS in DE may affect or contribute to the deterioration of English writing and reading skills;
- The educational levels of learners who will use SMS; and
- Limitations regarding the information that can be communicated through text messaging.

**Technology issues**
- SMS signal problems and message errors.

**Objectives and values**
- Suitability of SMS for disabled clients;
- Limitations of SMS in relation to social interaction;
- Alignment of SMS content to student learning competencies; and
- Proper use of the SMS load for the purpose of the study.

**Processes**
- If a user does not answer an SMS question correctly, how may s/he receive clarification?
- What steps should be taken when a client drops out of the research?

**Staffing and skills**
- The SMS model to be incorporated in the training of ALS implementers/facilitators; and
- Training to advance knowledge on instructional design of SMS modules.

**Management and structures**
- Content and design of materials will be collated and handled by ALS; and
- The MDFI will design and handle the technology and the research aspect.

The project team has also explored various technical options for the cost-effective delivery of educational content via SMS:

- **Cell phone operators.** Cell phone operators in the Philippines offer a range of relevant services. These are primarily designed for commercial users, with transmission of a typical SMS costing 1 peso (half a US cent). The existing telco business model would require the users (in this case, the students) to pay more than twice the usual
SMS rates. This could become a burden to students if an SMS development project were to proceed under this arrangement.

- **Locally installed cell phone systems.** The project has considered developing its own system whereby a cell phone would be interfaced with a personal computer, using open-source GSM software to facilitate exchange of data between the server and student. This possibility is still being explored. The project is also investigating an automated version of this type of service.

- **GSM Data Terminal.** The MDFI team has also met with representatives of the Applied Science Technology Institute of the Department of Science & Technology (ASTI-DOST) in the Philippines, to consider an existing system: a hardware and software system developed by the Institute called the GSM Data Terminal. This is a viable and efficient option for the project, using a card plugged into a computer's internal slot to send and receive SMS messages. The software can be customized to user needs, as in the creation of algorithms for a learning management system. The Mongolian partners in the project are also considering using this system.

**Conclusions**

This ongoing series of studies has confirmed that the rapid expansion of mobile phone technologies, and the particular popularity of SMS text messaging, offer major opportunities for formal and nonformal education in Asia. The project has examined the appeal and applications of SMS-based learning for a broad range of working individuals in the Philippines and Mongolia, and has observed a common enthusiasm for this novel educational approach. Based on the findings reported above, the Mongolia and Philippines teams are now in the process of designing SMS-based learning materials for pilot testing.

The Ulaanbaatar team has decided that SMS messaging will be a key element in an English course that will also include a workbook, dictionary, and audio CD. The participants are given instructions on how to use the audio CD in studying the words and sentences, and they practice these technical skills in their own time outside the classroom. The relationship between the SMS messages and the workbook is considered particularly important. An approach has been designed whereby the workbook materials need the SMS material for full comprehension of the content, and for it to be possible to complete the exercises.

In general, the approach is designed to simulate and expand the face-to-face process of learning English through SMS messaging. The participants are assembled in a classroom with a teacher/facilitator (T/F), and work separately, discussing the exercises if they wish. The T/F gives participants their first SMS message on a card—information essential for them to do a particular workbook task—and directs them to the relevant page of the workbook. The participants then complete the task and take their workbook to the T/F to be checked. The T/F indicates which parts of the task are right or wrong. If the exercise is correct, the participants are given the next SMS. In the event of errors, the students can correct them using the dictionary.
and CD. Ultimately, the two country teams aim to develop a wide range of SMS-based materials to harness the educational and social development potential of this ubiquitous new communication tool.

Acknowledgements

The survey project reported in the second half of this article is supported by the Pan Asia Networking (PAN) Program Initiative of the International Development Research Centre (IDRC), under a grant to the Virtual University of Pakistan for the Project “PANdora: Distance and Open Resource Access.” The article is an expanded version of addresses to the IDRC-supported Symposium on Information and Communication Technology for Social Development organized in Jakarta by the ASEAN Foundation (May 2006).

Notes on Contributors

Felix Librero is Chancellor of the University of the Philippines Open University at Los Baños.

Angelo Juan O. Ramos is Executive Director of the Molave Development Foundation Inc. (MDFI), Manila, Philippines.

Adelina I. Ranga is Supervisor, Bureau of Alternative Learning Services, Department of Education, Division of City Schools, Manila.

Jerome Triñona is Information and Communications Officer and PAN project coordinator at the MDFI.

David Lambert is Project Coordinator, English for Special Purposes Foundation, Ulaanbaatar, Mongolia.

References


