

Education for All Through the Mobile Phone: The University of the Philippines Open University Experience

Melinda dP. Bandalaria
University Registrar and Asst. Prof.
University of the Philippines Open University
Los Banos, Laguna, Philippines
e-mail: mbandalaria@upou.org
Phone Number: +63 49 536 6001 to 6006 local 100
Fax Phone: +63 49 536 6012

Abstract

Cost and access have always been the two major factors that hinder wider participation in education. Even in the distance mode of instructional delivery these two major considerations have been translated to cost of and access to technologies which are used in delivering instructional content and student support services especially to online or e-learners. The challenge is even more pronounced in a third world setting where the digital gap is more of the rule than the exception.

This paper will discuss how the University of the Philippines Open University is using a very simple, inexpensive and accessible technology, the cellular or mobile phone, to promote wider participation in education even from the sectors considered to be "digitally disadvantaged". Specifically, the paper will touch on 1. the decision-making considerations on the use of cellular/mobile phone in distance education; 2. the evolution on the use of cellular/mobile phone to support instruction in a distance education setting; and 3. the current uses of cellular/mobile phone in an educational setting where e-learning has become the buzzword. The paper will also try to draw lessons and provide recommendations that can serve as guide for educators in selecting appropriate technologies to build a knowledge-based society through open and distance education.

The data used in this paper came from the journal of the author who has been and still part of the whole process of using the cellular phone as one of the tools in delivering education through the distance mode.

Introduction

Distance education has been considered as one of the means to promote access to education and probably the means also to provide education for all, something that is essential in the building of a knowledge-based society. This mode of instructional delivery however largely relies on information and communication technologies, which to some extent, may also prove to be the limiting factor if distance education providers will not be careful and discerning in their choice of technologies to use.

In its continuous efforts to promote access to quality education, the University of the Philippines Open University (UPOU) has turned into the use of the ubiquitous technology, the cellular phone.

This paper looks into UPOU's one decade of experience of combining various information and communication technologies for effective and efficient delivery of instructional content and support services to as many lifelong learners as possible not only those within the country but even beyond the Philippine shores as well. Specifically, the following will be discussed: 1. the development of distance education in the Philippines highlighting the dominant technology in each generation; 2. the decision-making considerations on the use of cellular phone in distance education; 3. the applications or uses of cellular/mobile phone in a distance education setting. The paper will also try to draw lessons and insights that can serve as guide for educators in selecting appropriate technologies to help build a knowledge-based society through open learning and distance education.

Much of the information that will be used in this paper came from the personal account of the author who has been with UPOU even prior to its establishment and has been part of the whole process of planning, designing and implementing initiatives on the use of cellular phone in UPOU's program implementation.

The University of the Philippines Open University (UPOU): Some Background Information:

The University of the Philippines Open University (UPOU) is the 6th autonomous unit of the premiere university in the Philippines, UP. Established in February 1995, UPOU was mandated to democratize access to quality education by offering degree and non-degree programs and courses in the distance mode of instructional delivery. The university now offers a total of 17 degree programs, 16 of which are in the post baccalaureate level; and 8 non-formal courses. There is only one undergraduate program, the Certificate in Associate in Arts and one PhD program in Education. As we celebrate our 10th year now with the theme "Creativity, Collaboration and Convergence", we also reflect on a decade of experience of continuous explorations and innovations in our efforts to promote wider access and participation to education.

Discussion

a. The development of distance education in the Philippines.

The development of distance education in the Philippines can be divided into four phases or generations and can be said to be more of the influence of the advancements in information and communication technologies. There is no clear demarcation as to the end or start of a particular generation rather, the characterization was mainly based on the dominant technology used in delivering instructional content and support services to students. It should be noted, however, that center to all these generations and explorations and innovations on the use of technologies is the effort to reach as many students as possible.

First generation distance education: The use of radio to deliver instructional content to farmers, housewives, out of school youths and other targeted sectors, also known as the school on the air, can be said to be the first generation distance education in the Philippines. This was the prevalent system of distance education since the early 50's up to the pre UPOU years. The system however has a limitation such that only those living in the area covered by the radio station can listen and participate/enroll in the school on the air. Hence, literature reveals scattered efforts of the first generation type of distance education in various localities of the Philippines.

Second generation distance education. This came about with the implementation of degree programs in the distance mode of instruction and characterized mainly by the use of print for the instructional materials supplemented by once-a-month face-to-face study sessions. This was the system initially used by the UP Open University with the face-to-face study sessions being held in its Learning Centers located in strategic areas of the country. However, the provision for the face-to-face sessions somehow necessitated that a certain number of students must be enrolled for the university's operations to be cost efficient. In these face-to-face sessions, a local tutor had to be identified and trained by the university. In the event that the required number was not met, the program would not be offered in that learning center, hence resulting in turning away a good number of students per learning center.

Third generation distance education. In an effort to address the concerns identified in the second generation distance education, a new element was introduced to the way distance education was being implemented by UPOU – the use of telephone for tutorial or what we termed as teletutorial. With the teletutorial, the university was able to offer the program in a learning center even if the number of enrollees per course is small. For a more cost efficient operations, two to three learning centers are linked during tutorials through the telephone with the tutor in just one area or learning center. Teletutorials are also scheduled once a month in a university learning center. However, even with the more than 20 learning centers distributed strategically all over the country, still a significant number of students found it impractical and expensive to attend the teletutorials given the archipelagic nature of the

country. This, in a way, also affected the enrollment. At the same time, however, it was observed that more and more students were taking greater responsibility over their own learning in terms of being more independent learners and foregoing the tutorial support that the university provides to its students and instead make full use of other information and communication technologies to consult their professors and do other course/academic-related activities.

It should also be noted that until the early part of the third generation distance education, support services are provided through the university's learning centers where the students can drop by to avail themselves of such services.

Fourth generation distance education. One can say that the UPOU is now on this stage characterized by the mixture of multimedia materials (print, video, audio and in some cases, interactive computer instruction), online tutorials, and mobile learning through the use of cellular phone. The dominance of these technologies in UPOU's operations became pronounced in 2001 when the decision was made to put in place the online tutorial system for most of the courses of the university. To date, more than 95% of UPOU courses rely on online mode for tutorial support and almost all students use the cellular phone in one or more study-related concerns.

b. Decision-making considerations on the use of cellular phone in distance education

The following were the major considerations that made UPOU to use cellular phone in its delivery of instructional content and support services to students.

- 1) The need to fulfill the university's mandate to deliver quality education particularly to the underserved areas and sectors of the Philippine society.

As mentioned, it is UPOU's mandate to deliver quality education to lifelong learners whoever and wherever they may be and whatever their circumstances may be. The four generations of distance education in the Philippines are clear indications of the continuous efforts to fulfill this mandate. As discussed, progressing to the next generation in the effort to solve existing problems again gave rise to new set of concerns which must be addressed.

The university's move to go online unintentionally excluded the greater percentage of the Filipino people who were still digitally disadvantaged. Supplementing online delivery with the use of cellular phone, however, somehow solved this concern to a certain extent. Moreover, the move to explore the full potential of cellular phone to deliver instructional content is envisioned to contribute more to the efforts of building a knowledge-based society.

- 2) The high level of ownership, penetration and use of cellular phone in the country.

The Philippines has been dubbed as the texting capital of the world with about 50 million text messages sent daily. The figure jumped to 100 million during the height of the uprising against former President Joseph Estrada. This was revealed by Ramon Isberto, spokesperson for Smart Communications, one of the two top cellular phone service companies in the country ([http: sfgate.com](http://sfgate.com)).

As of June 2004, there were about 26.9 million users of cellular phones in the country with penetration rate placed at 32%, much higher than the projected world penetration rate of 23% by 2007. The projection of Nokia Philippines, Inc. remains strong for the country: 45-50% cellular penetration in 2005.

Isberto further observed that "within the span of few years, texting started developing a subculture and that subculture went mainstream. We have an entire generation of Filipinos who are unintimidated and have no fear of using cell phones for a variety of purposes."

Texting took off fast in the Philippines because it's cheaper than making calls. Text messages cost only 2 cents each, while calls cost as much as 10 times more. The introduction of prepaid services also made cellular services more affordable. It now accounts for more than 70% of the entire cellular mobile market in the country. The electronic loading system has also made it possible for one to use the service for as low as PhP2.00 and which can be done from almost every corner "sari-sari" store.

A closer look at the profile of the cellular phone users would reveal a cross section of the Philippine society. From the top level executives occupying posh offices in the most urban places of the country to students, maids, drivers, and even people without regular income or regular jobs.

The high level of penetration of cellular phone can also be attributed to the establishment of cell sites of the two biggest cellular phone companies in the Philippines: SMART and Globe. Globe has 2,700 cell sites while Smart was able to put up 4,000 as of 2004.

These realities made cellular phone a very potent tool in delivering education to a great majority of the people. This is also considering the plans of the cellular phone giants to penetrate areas outside Metro Manila which are now being considered to be the growth areas. The market has been saturated in Metro Manila with penetration level reaching almost 70%.
- 3) The realization that not all lifelong learners would want a formal degree but just practical knowledge to help them cope with common and everyday concerns.

From time to time, people would want answers to some common questions and would seek practical knowledge and bits and pieces of information pertaining to health, for instance, language, etc. Ideally, one would go to a bookstore to buy a book on the topic, or search the Internet. A book may prove to be expensive and going to a bookstore requires time which sometimes busy people could not find. Again, searching the Internet would mean knowledge and skills on the use of the hardware and the software and may cost at least Php30 per hour. Providing access to these practical information through the cellular phone upon demand would prove to be not only convenient but cheaper as well to the individual.

- 4) No extensive trainings required for the users – and no big investment on software and hardware as well.

As mentioned, cellular phone is owned and used by people from all walks of life. Both the skills to use the technology and the technology are there already, hence the university need not allocate resources for the purpose. If ever, resources were allocated to develop the materials appropriate to the use of cellular phone for instructional delivery, and for monitoring and evaluation of the impact of the initiative.

- 5) It is almost synchronous (when professors are able to respond immediately to student queries) and at the convenience of both the professor and the students. The students can text their inquiries while they are studying – they don't have to go to an Internet Café, or open their computers and connect to the Internet. The handy gadget which they carry with them everywhere can be used. The professors, on the other hand, can reply when it is convenient for them to do so and just like the students, they don't have to access the Internet to do so. In fact, it wont take so much time to answer simple inquiries from the students and can even be done while riding a public transportation, waiting for an appointment – with just few minutes to spare.

c. The applications or uses of cellular/mobile phone in a distance education setting education

At present, the UPOU has found the following uses for the cellular phone:

- 1) Delivering instructional content

In February 2004, UPOU launched its mobile learning or m-learning program in cooperation with one if not the biggest cellular phone company in the Philippines: SMART Communications. The m-learning program has been described as for “learners on the go” and designed for individuals to spend idle time productively by increasing

understanding of important topics and help develop skills that are vital in today's knowledge society.

The first generation m-learning program of the university is the combination of cellular phone and lessons in print-pocket-size modules. One simply texts m-learning to 700UPOU (700 8768) and gets as reply diagnostic questions on the topic selected. Each question is provided with correct answers and brief explanation on the answer. From the diagnostic questions alone, the texter can already get practical knowledge on specific topic selected or even correct common misconceptions. If the texter wishes to know more about the topic, he/she can buy the m-learning module.

Lessons that are now available are:

For the Mathematics Series:

Mental Math

For the English Series:

BSTA TXTR PUR SPLLR?

From Head to Toe Body Idioms

For the Health Series:

Lifestyle Check

Eating Matters

Let's Get Physical

Going Up in Smoke

Enjoying Life's Pleasures

To ensure quality, learning materials are packaged following the university's course team approach wherein the writer is assisted by an instructional designer and a language editor. Since a component of the content is delivered through the cellular phone, a programmer has been added to the course team to package the information into the format required by the technology.

In m-learning, the lessons are packaged in small capsules and presented in handy format. The modules can be conveniently put in one's pocket or bag and one can spend a few minutes on each lesson even while waiting for an appointment or riding a public transport.

Those who wish to earn certification after completing the lessons in related series can do so after taking and passing the exam on the specified topic.

The second generation m-learning program is now in the planning stage. It can be generally characterized by the delivery of the whole lesson using the cellular phone. The possibility of entering into an agreement with other cellular companies is also being explored to, again, widen the reach and coverage of the program.

2) Means of tutorial support and student consultations with professors

The exclusion of the digitally disadvantaged sectors when the university went full blast in online tutorials was somehow solved with the use of cellular phones. It has become the "way of life" at the university to conduct tutorials and consultations with students using texting or calls through cellular phone.

I have an advisee who is based in another province, island in fact, and he was able to complete his research course up to the finalization of his manuscript with our consultations done through the cellular phone. He sent the materials through email, I will return the reviewed manuscript through email also and will inform him of such through SMS so he can go to an Internet Café and access the file. He will then call me if there are clarifications on my comments on his manuscript and we will go through each page together (using the digital file) while on phone. Imagine the resources we were able to save both in terms of travel money and time if we conducted these consultations (which happened several times) face-to-face.

3) Means of delivering other support services to DE students and immediate and accessible means for students to avail themselves of such.

Again, using the cellular phone, students can request for information about their concerns like change in exam venue, academic status, etc. University personnel in charge of providing support services to students also provide this kind of service. Also, requests for official documents like transcript of records, true copy of grades and various kinds of certification can also be coursed through the cellular phone and SMS. The Office of the University Registrar has an official phone and number which is being used for this purpose.

On the part of the university personnel, the cellular phone and SMS are also being used to relay urgent and important information to students. It has also been observed that inasmuch as the cellular phone has become an important tool for students, it has likewise become an integral tool for effective and efficient management and operations of the university.

4) Means for the university to disseminate information about distance education, its programs, application procedure, schedules, etc.

Those interested can just text UPOU to 700UPOU (7007868) and they will get detailed information about UPOU. They can select from among the key words listed which specific information they want to have.

Other initiatives on the use of cellphone that are now being put in place:

- 1) Document Tracking System (DTS) to monitor progress of application for admission. Applicants for admission to the various programs of the university are given tracking number so they can keep track of the whereabouts and status of their application. The initial design is for the system to be used using the Internet. The system is now being developed so this can be done using cellular phone also.
- 2) Online records of students showing the scores in assignments and exam grades. Just like the DTS for application, the system was designed to be accessed using the Internet. Again, a system is being developed so students can access their records and monitor their academic status easily using the cellular phone.

Lessons and Insights from the Experience

1. *It's still pedagogy more than the technology.* While it is true that technologies which can be used for distance education abound, the appropriateness of these technologies vis-à-vis the purpose and content of instruction should always be the primary concern. Instructional designers should be actively involved for more effective delivery and chunking of lessons considering the technology being used. The real purpose of instruction should not be overshadowed by the desire to use modern information and communication technologies and be able to join the bandwagon.
2. *The cost will always be a consideration.* This was also implied by Bates (2000) when he said that "institution should understand the costs of using new technologies". These costs not only cover the purchase of the technology itself (hardware and software) but also the cost of training manpower so they can acquire the needed knowledge and skills to use the new technologies or to hire additional staff who possess the needed knowledge and skills. In the case of the use of cellular phone, the cost that was considered was the development of materials appropriate to the design and purpose of the program and the technology involved.
3. *Access and cost of access to the technology by students/learners.* While the university can always find ways to make available the needed technologies to university personnel, the other end of the line should also be a primary concern given that they, the learners, are the end users of all the initiatives. Of primary importance are the cost of use of technology, access to these technologies, and skills needed to use these technologies.
4. *Partnerships and collaboration are strategies to reduce cost.* The trend now is collaboration among institutions with resources to allocate for common purpose. In the case of formally

integrating cellular phone in one of its programs, the UPOU collaborated with a cellular phone company which has extensive facilities and wide area of coverage. If UPOU is to fulfill its mandate in the shortest possible time, it has no other way to go but to collaborate and converge its resources with other organizations involved in the pursuit of similar interests and goals.

5. *Implementation of new strategies will require accompanying changes in organizational structure and procedures and in some cases new policies too.* In the case of the extensive use of cellular phone in its operations, the university had to find ways to facilitate provision of cellular card subsidy to selected personnel and to a limited extent, provision of a cellular phone unit to key offices. Considering that this move necessitates allocation of part of the meager resources of the university, an accompanying policy was also put in place.
6. *Essentiality of research and evaluation.* As in other new initiatives, there is a need to integrate research component in the use of cellular phone especially in delivering instructional content. The need to monitor effectiveness and efficiency of the system vis-a-vis the goals set and other information which are critical and has implications to policy formulation should not be taken for granted.

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About the Author:

The author is Assistant Professor at the Faculty of Information and Communication Studies at the University of the Philippines Open University and concurrently the Registrar of the same university. She holds a PhD degree in development communication and has been involved in

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distance education for more than 10 years now. She has also completed her graduate Certificate in Distance Education from Indiana University.