

# Using Electronic Conferencing Environment for Research in Open and Distance Learning: Lessons from a Major Regional Study

*Jegade, Olugbemiro; Ng, Fowie; Kwok, Louisa; Tsui, Cecilia & Zhang, Wei-yuan  
The Open University of Hong Kong*

## Abstract

The development in information and communications technology, necessitated by the quantum leap in the emergence of and advancement in computer technology and telecommunications has led to a variety of its application. At the moment, Computer Mediated Communication (CMC) has become quite pervasive in open and distance learning; and practitioners and colleagues use it frequently in daily communications and for research. However, few studies have reported its use as a major research tool. While conducting a comparative study on the administrative styles, educational processes and outcomes in Asian open universities we were confronted with the challenge of getting groups of experts and practitioners as well as facilitators to help think through some critical issues in the research. This was considered necessary to situate both the theoretical framework of the study and to provide an empirical basis for other aspects of the study. This paper reports on the use of a computer conferencing environment using a Listserv for conducting some aspect of a major research study. It outlines the processes, management, and challenges in its use for research. The implications, and especially to serve as guidelines and advice to those who might propose to use the same methods in their research, have been outlined.

## Introduction

The phenomenal development the world is witnessing in technology has exerted considerable impact on education and the way and manner in which knowledge is transmitted to learners who are remotely located and or shared amongst professional colleagues or cohorts of learners. As noted by Marshall (1996), the convergence of television, telecommunications, publishing, computing and telecommunication is creating a media environment with enormous implications for flexible, lifelong, mass higher education. In alluding to this observation, Turnbull (1999) says that the convergence of electronic media has necessitated the medium being also the messenger and the method. The effect this is having on education also impacts on research.

De Vries, Naidu, Jegede and Collis (1995) who used computer conferencing to experiment on an alternative method for addressing the staff development needs of those involved in distance education activities at the University of Southern Queensland, reported that Computer Mediated Communication (CMC) has become an increasingly common means of interaction among staff in educational institutions. CMC is an aggregate of computers and telecommunication systems used to generate electronic networks, which offer many educational possibilities. CMC refers to all forms of electronic communication between persons with the help of computers, modems and the telecommunication systems. Although CMC is often considered to be a narrow-band medium of communication, its asynchronous nature provides special benefits for

teaching and learning. For instance, CMC has been reported to create an interactive community of learners and teachers and develops self-directed learning (Jegade and Gooley, 1994). Examples of CMC include computer conferences, electronic bulletin boards, fax, voice mail, electronic mail, and audiographic conferences. According to Wagner (1993), the most prevalent feature of the technology applications associated with distance and open learning is teleconferencing. Teleconferencing has four primary modes: audioconferencing, audiographic teleconferencing, video conferencing and computer conferencing. The major reasons accountable for their use include: allowing simultaneous transmission of voice and graphic images across local lines in a conference call format (Knapczk, 1993), provision of a collaborative learning strategy which emphasises teacher-student relationship (Idrus, 1993), and potential for significantly enhancing the pedagogical possibilities of audio teleconferencing (Taylor, Jegede & Hunter, 1992).

Several online conferences are now being hosted either as stand alone or as part of major conferences to elicit the opinions and contributions of those who are unable to physically attend the conferences. Examples of such online conferences include 'Sharing the Circle: Telling the Story' (an online interactive conference organised by the Community Health promotion Network Atlantic, Canada; and the computer conference on 'Challenged Communities and Distance Education' as a lead on to the Pan-Commonwealth Forum on Open Learning held in Bandar Seri Begawan, Brunei Darussalam from 1 - 5 March 1999). Although many researchers often post their survey instruments on the Internet for access and completion by self selective samples of respondents, there is a shortage in the literature of reports of research activities in which some aspect of computer conferencing was built in as a deliberate medium for academic discourse and exchange of ideas in order to situate both the theoretical framework of the study and to provide an empirical basis for other aspects of the study. At the Open University of Hong Kong (OUHK) a major study funded by the President's Advisory Committee on Research and Development (PACRD) was designed and conducted with a deliberate inclusion of computer conferencing as an avenue for exposing the study to colleagues world wide for their input and discussion relating to the study's theoretical framework and to benefit from their experiences in refining the subsequent stages of the study. The study was aimed at exploring the administrative styles, educational processes and outcomes of selected Asian open universities in a comparative manner. The following are the three major questions which were investigated in the main study:

- (i) How do Asian open universities differ from each other, and from their counterparts in other regions of the world?
- (ii) What best practices in instructional design, use of communications technology, considerations for cultural and political factors, especially language, can be learned from the open universities?
- (iii) What differing outcomes are apparent, and what is responsible for the differences?

## **Procedure**

A three-stage procedure was adopted for the whole study; the computer conferencing being the first major stage of data gathering. The reasons for the inclusion of computer conferencing as part of this study include the following:

- To find out if CMC is a viable and effective medium to aid for research in distance education.
- To enable a broad range of distance educators and practitioners to participate in a research project which involves a large region that has recorded the fastest growing use of distance education for human resource development.
- To provide a collaborative forum for discussion about issues which are of common occurrences in the provision of distance education in Asia.
- To use an interactive computer mediated environment to facilitate information sharing and gathering amongst distance educators and practitioners in the region and globally.

This paper discusses the electronic conferencing aspect of this study with a view to ascertaining its efficacy regarding the above reasons for its use in the research. It reviews the processes, management, and challenges faced in its use for research. The implications, especially to serve as guidelines and advice to those who might propose to use the same methods in their research, have been outlined. In addition, a brief summary of the results of the ideas gathered from the discussion of the theoretical framework and other issues related to the research are discussed.

## **Conference structure**

The computer conference was held from 10 August till 14 October 1998. All distance educators and practitioners in the world, especially in Asia, who could be reached through the Internet were invited to participate in the 12-week conference. It was decided to use the forum for a discussion list for the conference instead of a World Wide Web-based conferencing software because many people within the region may only have access to the email part of the Internet. What we in fact found was that not many distance educators and practitioners within the region had access, at the time of the conference, to any electronic environment. A web-based discussion would have enabled threaded discussion and a more structured format. However, it would also have required more technical assistance, required deliberate effort to access the discussion, and the need to understand how graphics could be handled if sent to the conference. The email-based conferencing system used was more appropriate for the study because, each subscriber to Costadel-L received automatically any message sent to the List without needing special access. The email type conferencing was basic enough to allow as many people as had access to this aspect of the Internet to participate quite easily without needing any special training in its use. The conference was divided into three sections with each section addressing one aspect of the focus of the study. Thus a consecutive discussion was held on the sub-themes: (a) administrative styles, (b) educational processes and (c) outcomes.

## **Technical design and moderation**

The conference was held on a discussion List - Costadel-L, created using the majordomo shareware. The List was created in July 1998, a month before the actual conference began, to enable the testing of all the protocols as well as get all members of the research team to be familiar with the environment and its use. Three members of the research team took on the role of moderating each sub-theme of the discussion. Their main tasks were to manage and facilitate the discussion, post on the List main items for discussion, introduced the discussion of a topic, lay out the parameters for the discussion and monitor the flow of the discussion, keep discussion focused on a particular thread till it switched to another, liaise with the expert keynote speakers for the discussion, and summarise and post on the List the discussion held for each sub-theme.

### **Keynote speakers**

Three expert distance educators and practitioners were invited from the United Kingdom, Canada and the USA to provide some introductory remark by way of keynotes to the three sub-themes of the conference. This not only gave it a semblance of the face-to-face type of conferencing, it also provided an added impetus to the discussion. This benefit was reported by de Vries, et al (1995) in their use of a teleseminar for staff development.

### **Results of the first stage**

#### *Subscribers*

The three-month electronic discussion forum attracted 102 subscribers from 15 countries. It was held in a consecutive series of three sections with sub-themes on (a) administrative styles, (b) educational processes and (c) outcomes. The countries represented and the numbers that participated from each country is as follows: Australia-20, Hong Kong-23, United States of America-15, United Kingdom-8, Canada-6, Philippines-3, China-3, Italy-1, Finland-1, New Zealand -1, Singapore-1, Mongolia-1, Germany-1, India-1, Malaysia-1, South Africa-1, Unknown-15, Commercial - 6, Organization- 5, and Network-4.

Although the total number of participants was quite impressive, our disappointment was with the low turn out of subscribers in Asia. In view of the fact that the research focused on Asia distance education, we expected that many more subscribers would have registered. Many reasons might have accounted for this development. As mentioned earlier, at the time of the study, many institutions in Asia, especially in China and other less developed countries of Asia, did not have access to Internet facilities. In institutions where the facilities were available, staff did have easy and immediate access to an email account. The email facility was usually located in one central place to which everybody went to retrieve or send messages. In many cases also someone else had to do the word processing of the messages as well as retrieving, printing and distributing the messages. This process was laborious enough to dissuade any interested subscriber. The second problem was the language of the conference. English, which was used for the conference, is a second or indeed third language for many of the countries in Asia. While in some of the countries such as Hong Kong, India, Malaysia, Pakistan, English is commonly used, in others such as China and Japan it is hardly used. This therefore severely limited participation. However, one major observation which impressed every

member of the research team and indeed noticed by many participants was the fact that the electronic conference sustained the interest of all subscribers for the whole period. This was noticed through the continuous posting of issues and responses to comments and ideas up till the very tail end of the conference.

### **Summaries of each sub-theme**

At the end of the period allotted to the discussion of each sub-theme at the electronic conference, the moderator summarised and posted back on the List the major ideas which emerged from the discussion. Attempts were made to relate the current sub-theme discussion to the next and previous one as appropriate in order to maintain a thread within the whole conference theme and to serve as reminders to many subscribers who might have lost track of the major issues being discussed. The three sub-theme summaries are as follows:

#### *Sub-theme 1: Administrative styles*

Prof. Gajaraj Dhanarajan, as keynote speaker, launched the first section of the Forum. He emphasised the importance of developing learner-centred institutions with a focus on three core functions: (a) course / programme development, (b) learners' support, (c) staffing and their functions. Finance, information systems, technology, research and quality assurance should serve as important elements supporting these core functions. He advocated systems demonstrating the philosophy of openness and empowerment of people, who should strike a balance between academic freedom and accountability to develop quality academic programmes as well as educational services.

With regard to the establishment and development of distance and open learning institutions, a wide range of issues; such as, course development, ownership of intellectual property, tenure of academic staff, communication, and the volume of clerical work involved were discussed.

Some discussants pinpointed on the positive implications of research in boosting the standard, and relevance of teaching. On the contrary, others argued that research evidence had demonstrated weak association between effectiveness of research and teaching.

There was a call for defining "administration". From traditional viewpoint, it was found that the tension between "academic" and "administration" has been unsettling. Some discussants queried the characteristics of a learner-centred organization. A scholar in United Kingdom pointed out that management practices in different countries had exhibited cultural differences, which would affect how distance learning systems operate. Moreover, concern was raised about drawing a distinction of these culturally embedded terms. There were also appeals for a generation of literature on "Management of Distance Education", which has been in great demand in developing countries.

As Prof. Dhanarajan stated "open learning more than anything else is about empowerment of people", a discussant in Hong Kong drew quotations from Lao Tzu, one of the great Chinese philosophers, to demonstrate analogy of western and Chinese concepts. The value of Lao Tzu's philosophy, relating to the "Tao of Leadership" and the "Art of Administration", in liberating human potentials was shared by discussants. The scholar in United Kingdom also illustrated differences between concepts / practices in relation to "sharing of power and information" as well as "structuring of organisations" in the east and west.

A few discussants raised concern on the lack of government support in financing distance and open learning institutions. It was noted that most of the Asian open universities had drawn a high proportion of their income from student fees. Institutions had to keep down expenditure on student support. As a result, quality of teaching and learning, as well as successful completion rates were affected. There was an appeal for research for more data so as to win the numbers game for funding. Some discussants suggested mounting collaborative research on cost-benefit analysis in distance and opening learning. A discussant in Hong Kong also suggested that institutions should diversify their funding base.

The scholar in United Kingdom shared the experience of launching projects in Mongolia, where most of the projects had been donor-funded or donor-driven. Many projects suffered from under-resourcing with consequent results of poor quality of provision and rejection of distance and open learning. It was claimed that funding for education, in general, had to compete with other public priorities. A discussant in Hong Kong pointed out that there has been a lack of evidence demonstrating contribution of open and distance learning towards economic development at national level.

A discussant in India called for collaborative development of low-cost mass media distance and open learning materials. This vision was commonly shared. A few discussants supported the vision and suggested establishing a global collaborative learning environment, where institutions should facilitate the process of construction of knowledge through collaboration and sharing. A discussant in United States offered some examples in his country. On the other hand, a discussant in Hong Kong put forward the pros and cons as well as future challenges of Information Technology (IT). In general, discussants from various countries agreed that distance and open learning institutions should be learner-centred organizations, which should provide an open environment, where people should, as much as possible, be empowered to develop as well as to achieve their aspirations.

There was a consensus that administrative styles of distance and open learning institutions would hinge on the following:

- 1 National culture would be an influential factor in building closer inter-institutional collaboration across borders. Therefore, some efforts to increase understanding of one another's differences as well as similarities of needs and goals in distance and open education would enhance global collaboration.
- 1 Organizational culture would affect institutional efficiency and effectiveness.
- 1 The level of government funding, and community support would be key issues influencing decision-making processes as well as administrative styles of institutions.
- 1 The availability and applicability of information technology would also affect the structuring of an institution, the flow and speed of information dissemination, the mode of delivery and communication.

#### *Sub-theme 2: Educational processes*

As keynote speaker of the second section of the Forum, Prof. Jenny Johnson assured the responsibility of the Instructional Team, the importance of supports to students and the improvement on a course after receiving students' feedback through questionnaires. A scholar gave us a full description on the United States education system, and led us to reflect on whether distance and open learning should simply be to produce highly

informed or highly skilled persons. He prompted us to realise the essential qualities in education; such as development of high level independent thoughts, and problem solving abilities. Distance and open learning brings people together on learning, and that through this type of education, these essential qualities cannot be ignored. One should consider seriously what to teach, and how to teach in local as well as national contexts. Prof. Gajaraj Dhanarajan guided us to the four pillars in education: learning to be, learning to know, learning to do and learning to live together. He suggested that these four pillars must be at the foundation of any curriculum in all sectors and in all levels.

On the other hand, Prof. Jenny Johnson raised that memory, as a vital skill, must be paired with knowledge of processes. She cited her actual experience in helping students through guidebooks, online discussion rooms and, in some occasions, an advisory team. She announced that distance and open learning courses could be delivered and supported through the following media: online web, voice mail, instructional television, interactive television network, face-to-face meeting and correspondence.

Another scholar in United Kingdom contributed 10 propositions on information technology (IT) in distance and open learning. These ten propositions stated the great potential of IT, the time that it would demand, the cost, the variation on quality of course materials, the reliability and compatibility of software. A discussant from Australia illustrated examples of easy access to distant expertise and facilities through online technology.

The scholar in United Kingdom repeated that the cost in implementing IT could not be overlooked. On the other hand, consideration should be given to countries with limited education allowance and restricted physical facilities to incorporate IT. With the diverse backgrounds of distance learners, our IT policies must be appropriate and realistic so as to reach the goals of education.

Finally, it was responded that ergonomics should be introduced to learners who rely on computer screens in studying. A discussant showed merits of printed materials although he recognised that IT should provide the accessibility and convenience to students.

### *Sub-theme 3: Outcomes*

Dr. Gordon Burt, as keynote speaker of the third section of the Forum, elicited us to think about the questions that we would like to ask about outcomes in distance and open learning. He illustrated the possibility of high standards, which would be in conflict with other criteria. He stressed the importance of organizational skills in order to facilitate the impact from evaluation. Then, he added some examples in United Kingdom about outcomes of distance and open learning; in terms of drop out rates, use of new technology, and the curriculum specialism for us to ponder. These examples in outcomes were discussed in the context of United Kingdom.

However, some discussants pointed out important issues about outcomes as values and process. It was further elaborated on the long-range study approach to track the ultimate feedback. Also, the scope of the study would be determined by the goals of individual institutions.

One Hong Kong scholar emphasised the academic specialism of the curriculum in Hong Kong context, in which more and more demands and provisions have been made to offer specialised degrees at different levels. An American scholar related the situation

to the United States, where there have been quick responses on very specialised and specific 'certificate program' in the market.

Some discussants raised issues about different funding mechanisms at various distance and open learning institutions and the research as well as learning outcomes. Dr. Burt envisaged the emphasis of United Kingdom government, who demands greater accountability in learning and research from the academic society. He questioned the use of same indicators by the government to assess all universities. Prof. Jenny Johnson added the use of anonymous assessment by their students at the end of each course. Staff would be given the norm analysis of the assessment.

On the other hand, the United States experience of specialisation degrees being offered by new options of online basis was shared. The majority of programmes were offered by 'dual mode' of using online and campus-based methods in some institutions. The flexibility of general studies degrees could meet the adult learners needs and learning styles. An interesting question was raised about the situation that most campus-based education programmes have been funded by the state in some kind; whilst distance and open learning must be funded by the fees from students. A scholar in Australia shared the successful experience in combining distance and campus-based education of the Sydney Graduate Medical Program. It was pointed out that the philosophy of 'life-long learning' should be supported with resources in some way.

Some discussants talked about the relatively lesser distinction of distance and open learning institutions and traditional institutions. A Hong Kong discussant made reference to an article by Athanasou (1998), which is available, online of his framework for evaluating the effectiveness of technology-assisted learning. Then, Dr. Gordon Burt applied the notion of 'systematic investigation of the worth or merit of an object' and the six key issues of 'ethics', 'coverage', 'costs', 'objectives', 'effects', and 'stakeholders' to UKOU. He further added the issue of 'academic disciplines'. It was alerted that care should be taken in applying these different issues in short-term projects funded by donors. The importance of different responses to different environments was recognised.

### *Overall summary*

An overall summary was made to thread through all the discussions and to tie all the issues into a condensed package which was posted back to the List for everyone to comment upon and keep as 'conference proceedings'. The salient issues which emerged and helped to focus on the theoretical framework of the whole study are itemised as follows:

- Distance and open learning institutions should be learner-centred organisations, which should provide an open environment, where people should, as much as possible, be empowered to develop as well as to achieve their aspirations.
- National culture would be an influential factor in building closer inter-institutional collaboration across borders. Organisational culture plays a key role in shaping institutional efficiency and effectiveness.
- The level / amount of government funding would be a key issue influencing decision-making processes at various levels, as well as administrative styles of educational institutions.
- The availability and applicability of information technology would also determines the structuring of an institution, the flow and speed of information dissemination as well as mode of teaching / communication.

- The purpose of distance education might not only produce highly informed or highly skilled persons but also develop the high levels of independent thought and problem solving abilities. The four pillars of education: learning to be, learning to know, learning to do and learning to live together should be used to focus the local and national context of distance teaching and learning.
- The outcome of distance education are evaluated by different ways in different institutions, such as cost-effective, retention rates, passing rates, the use of new technology, the curriculum specialism and students assessment. However, the values and process are important when we consider outcomes.

The following conclusions and implications have been drawn from the experience of using the computer-mediated communication as a research tool. These are discussed in line with the reasons stated for its use in our research. It is hoped that they will serve as useful lessons to guide others especially within Asia planning to include the use of an electronic conferencing environment for research in open and distance learning.

*Reason: To find out if CMC is a viable and effective medium to aid research in distance education.*

From the data obtained and our constant observations as participant researchers in the electronic conference, it was clear to us that the use of CMC as experimented with in this study is a viable and effective medium to aid research in distance and open learning. It is especially efficient in gathering, within a short time, views from a cross section of experts and practitioners around the world. Often times communications with and within countries in Asia could take longer than the time of the electronic conference. Indeed, the response rate to a postal questionnaire could be as low as between 20-30 per cent. Obtaining views from colleagues and especially experts across the world on a research being undertaken proves to be of immense benefit. Some of the ideas received, debated and discussed helped the research team in reformulating some of the research questions and in reviewing the methodology. The following issues raised in the electronic conference assisted us in the study:

- how issues of funding and financing influence administrative styles and decision-making processes
- the role information technology plays in administration as well as teaching and learning.
- the effect which the style/styles of administration (at departmental and institutional levels) have on the teaching and learning processes
- the similarities and differences across the region on the most important aims of distance education.
- factors, other than physical, which contribute to the separation of learners in open and distance education
- the variety of media and the reasons for their integration into the teaching and learning process of the various Asian universities
- the indices for measuring outcomes of open and distance education and how do outcomes affect the people in open education institutions.

*Reason: To enable a broad range of distance educators and practitioners to participate in a research project which involves a large region which has recorded the fastest growing use of distance education for human resource development.*

With 102 subscribers spread across 15 countries, it could be said that the electronic conference attracted a broad range of participation in the study. Many face-to-face conferences do not attract as many participants nor do they attract as many contributions as we got in this electronic conference if each hit or posting is regarded as a major contribution. In face-to-face conferences time and other logistics often limit some forms of participation such as questions, elaborations, follow-ups, networking, etc. Asynchronous electronic conferencing allowed people to contribute as much as they wanted, enabled others to think through issues before making responses or further contribution. As found by de Vries et al (1995), the results of this indicated that the nature of moderation strategies of a CMC-based discussion contribute in no small measure to the success or otherwise of the discussion. In our case the moderators engaged the services of well known experts and practitioners whose contributions were very valuable in engendering and sustaining contributions. The moderators also interjected regularly to keep the discussions focused by taking up issues which would not normally be revisited in face-to-face meetings. For instance moderators often called upon any contributors who made reference to an experience, no matter how distant from the main issue, to elaborate. This often led to fruitful discussion from which many others learned and is supported by what has been reported in the literature (i.e. Kaye, Mason & Harasim, 1989; de Vries, et al., 1995).

Although it is often claimed that there are at least five times more lurkers than those who actually post messages to a List discussion, we found the number of actual participants from Asia quite low. This study was in the main meant for Asia distance educators and practitioners but we had more contributions from outside of the region than we had from within. Some of the possible reasons for this (such as language of the conference and lack of access to the Internet) have been mentioned above. In addition, other reasons as found out later through one to one communication and telephone inquiry included lack of time, cultural aspects of relating to others you do not know, lack of cohesion within an adhoc community, lack of spontaneity on the discussion list, the feeling of intimidation by others who are new comers to both the use of this medium for professional and academic discussion and to the field of open and distance education. It is interesting to note that others have found some of these reasons in online environments (Harley and Collin-Brown, 1999).

*Reason: To provide a collaborative forum for discussion about issues which are of common occurrences in the provision of distance education in Asia.*

We found through this study that using a topical issue as the basis of an electronic conference has many advantages. Foremost among these advantages is the collaborative environment it fostered. Half way through the conference subscribers felt at ease with one another and they were able to challenge opinions and questioned issues which led to more discussion and collaborative seeking of answers. According to Farnes (1993) and Harley and Collin-Brown (1999), several aspects of collaboration lead to learning on the Internet. They include 'participative' 'social', 'interactive'. They often lead to cognitive and metacognitive dimensions. Collaboration is loosely defined as an association which is usually aimed at achieving work-sharing, using differing knowledge and expertise to improve quality and/or take account of varied viewpoints, and building or consolidating a (learning) community ((Harley and Collin-Brown, 1999).

Clearly we saw from our electronic conference the need to share so as to learn, the need to appreciate and learn from differing viewpoints especially of listening to those

with years of experience and from older institutions in Asia and the rest of the world. One draw back here is the technical set up which did not allow for easy threading of the discussion. As mentioned we were deliberate in the use of an email-type conferencing system instead of a web-based type in order to respond to local and national needs within Asia. In spite of this drawback and with due consideration of the novelty of web-based conferencing, and the ease with accessing email-based conferencing, it might be instructive for others considering the use of the electronic media for the purpose for which we used it in Asia to think of the email-based conferencing for now. It handles attachment of graphics too although we did not have many postings with attachments or the inclusion of URLs or hyperlinks, which could have been an avenue for distraction.

*Reason: To use an interactive computer mediated environment to facilitate information sharing and gathering amongst distance educators and practitioners in the region and globally.*

Contemporary developments and advances in technology are forcing everybody to be familiar with and use the technological environment for many things including teaching, learning and conferencing. These are developing at a pace which makes the appropriate use of technology readily available in many communities. For instance, between the time we held this conference and now, a time difference of less than one year, almost all the countries which had no email connectivity when we held the electronic conference now have access. However, because not every academic has direct access to the Internet yet in many Asian countries, researchers would still need to consider other means to supplement the useful information that is available through an interactive computer mediated environment. In our case, due to the problems encountered as mentioned earlier (especially with language and access to computers), we had to design a questionnaire both in English and in Chinese which we sent by post to colleagues in Asia whom we knew were not able to participate in the electronic discussion. This set our research backward by three extra months.

The interactive and collaborative nature of the electronic conference allowed a cross-fertilisation of ideas between those who are located within the region and those in other parts of the world. Instead of waiting for their publication in journals, which might take at least 9 to 12 months to read, it was possible to read from the electronic discussion the emerging and latest ideas others are trying out in various sites of the world.

## References

- De Vries, L., Naidu, S; Jegede, O.J, & Collis, B. (1995). On-line professional staff development: An evaluation study. *Distance Education*, 16 (1), 157-173.
- Farnes, N. (1993). *Evaluation of an online education, SRC report, No.83*, Institute of Educational Technology, The Open University of the United Kingdom, Milton Keynes.
- Idrus, R. (1993). Collaborative learning through teletutorials. *Journal of Educational Technology*, 24(3), 179-184.

- Hartley, J. R., & Collins-Brown, E. (1999). Effective pedagogies for managing collaborative learning in online learning environments. *Educational Technology & Society*, 2(2), 1-9.
- Jegede, O. J. & Gooley, A. (1994). A front-end evaluation of computerised audiographic conferencing system in open and distance learning in Queensland A paper presented at the International Conference and Exhibition on Open Learning (Open Learning '94), Brisbane, Queensland, 9-11 November 1994.
- Kaye, T., Mason, R. & Harasim, L. (1989). *Computer conferencing in the academic environment*. Report, No 91, Open University, Great Britain.
- Knapczk, D. R. (1993). Use of distance education and audiographic technology in preparing practicing teachers in rural communities. *Rural Special Education Quarterly*, 12(3), 23-27.
- Maddux, C. D. (1991). Educational telecommunications: The road to maturity. *Educational Technology*, 31(4), 7-9.
- Marshall, S. (1996). Communicating change: The role of communication studies in higher education. Inaugural professorial lecture, Gippsland Campus, Monash University.
- Mason, R. (1992). Evaluation methodologies for computer conferencing applications. In A. R. Kaye (ed.). *Collaborative learning through computer conferencing. The Najaden papers*. Berlin: Springer-Verlag.
- Miller, D. (1991). Travel budgets with distance learning. *Training and Development*, 45(9), 71-74.
- Taylor, J. C., Jegede, O. J., & Hunter, R. (1992). *Audiographic communications: The Optel Telewriter Trial*. A report of a project funded under the National Priority (Reserve) Fund of the Department of Employment, Education and Training.
- Tkal, L. (1992). *Technology survey report. Occasional papers 2*. New South Wales TAFE Commission, St. Leonards.
- Trunbull, P. (1999). What's new in the education world? Developments in online learning. *FID Review* (forthcoming).
- Wagner, E. D. (1993). *A technology primer for distance educators*. Western Interstate Commission for Higher Education, Boulder, CO: Western Co-operative for Educational Communications.
- Willis, J. (1991). Computer mediated communication systems and intellectual teamwork: Social psychological issues in design and implementation. *Educational Technology*, 31(4), 10-20.

## **Biographies of the authors**

Olugbemiro Jegede is Professor and Director, Centre for Research in Distance & Adult Learning at The Open University of Hong Kong. Prior to this he was Foundation Head of the Research and Evaluation Unit, Distance Education Centre, the University of Southern Queensland, Toowoomba, Queensland, Australia. He was also the Foundation Dean and Professor at the Faculty of Education, The University of Abuja, Nigeria. He is the Editor-in-Chief of the electronic Journal of Instructional Science and Technology and serves on the Board of a number of other journals in distance and open learning, science education, and computer-mediated communications.

Fowie Ng is currently the Lecturer at the Centre for Continuing & Community Education of the Open University of Hong Kong. His specialisms include Health Services Management, Quality Management and Public Policy. His current research interests include Patient's Charter in the health services, quality in non-local courses in Hong Kong and outcomes in open learning.

Louisa Kwok has served as an academic in the School of Science & Technology, Open University of Hong Kong (formerly Open Learning Institute of Hong Kong) since 1990. She was a mathematics assistant lecturer in Hong Kong Baptist College from 1980 to 1985 and a mathematics lecturer at Hang Seng School of Commerce from 1985 to 1990. Her particular research interest is in the area of mathematics education, especially on adults learning mathematics with the availability of mathematics software.

Cecilia Tsui joined the Open University of Hong Kong in 1995. She is an Assistant Professor in Business and Management. Prior to that, she had worked for multinational corporations in trading and banking fields for some years. She had 11 years' experience as a business educator as well as an administrator at a tertiary institution in Hong Kong. Her major research interests specialize in human resource development as well as educational administration and management.

Weiyuan Zhang had BEd and MEd degrees from East China Normal University and a PhD from the University of Edinburgh. He was a post-doctoral fellow at the University of Hong Kong from 1996 to 1997. He has had fourteen years' research experience as an educational researcher at East China Normal University, the University of Victoria, the University of Edinburgh, the University of Hong Kong. Since 1998 he has been a research fellow at the Open University of Hong Kong. His research interests are open and distance education, comparative education, education in Greater China, educational psychology, guidance and counselling.