COMPUTER-MEDIATED COMMUNICATIONS AS TOOLS FOR PROFESSIONAL DEVELOPMENT: DEMOGRAPHERS WITHOUT BORDERS AS A CASE STUDY

by

Ayman Zohry, Ph.D.

American University in Cairo

email: azohry@aucegypt.edu

www.e-knowledge.ae

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Abstract:

The Internet has opened up new ways to enhance learning and professional development. The widespread of Internet and the expansion of high-speed connections and their availability for business firms and well as individual users has changed the way people communicate with each other. Internet groups are discussion and communication ways that use the Internet facilities to ease the communication between groups of individuals and legal bodies.

This paper explores the different types of computer-mediated languages such as email, listservs, electronic discussion groups, and newsgroups; advantages and disadvantages of each method are explored. The second part of the paper focuses on the experience of a professional discussion group "Demographers Without Borders" (DWB) and evaluate it as a case study. The DWBs was founded by the author in 1999 and it has about 100 members allover the world.

1. INTRODUCTION

The Internet has opened up new ways to enhance learning and professional development. The widespread of Internet and the expansion of high-speed connections and their availability for business firms as well as individual users has changed the way people communicate with each other. Internet groups are discussion and communication ways that use the Internet facilities to ease the communication between groups of individuals and legal bodies.

This paper explores the different types of computer-mediated communications such as email, electronic discussion groups, and newsgroups, multimedia conferencing, and mLearning. Advantages and disadvantages of each method are explored. The second part of the paper focuses on the experience of a professional discussion group "Demographers Without Borders" (DWB) and evaluate it as a case study. The DWBs was founded by the author in 1999 and it has about 100 members allover the world.

2. Computer Mediated Communications

Computer mediated communications vary from e-mail and internet browsers to computer conferencing and multimedia usage and e-learning.

1. The Internet and Browsers
2. E-mail
3. Multimedia Conferencing for Group Working and Learning
4. Online Databases
5. mLearning

2.1 The Internet and Browsers

Internet Explorer and Netscape are two common examples of computer programs, also called client browsers, for interacting with the Internet (the world-wide network of computers and computer networks). This is done by using a set of protocols known as the World Wide Web (WWW).

The WWW is a system whereby a host computer stores text and graphics documents that can be reconstructed on a client computer after the client has received a stream of data which has been coded in a specialized code called HyperText Markup Language (HTML). Using this system, text can be presented with various sizes, styles and colors. Graphics and even films can be integrated in a document.

Though browsers can not fully reflect the potential of the WWW, they still offer new possibilities as tools to navigate the Internet. The Internet has a vast number of nodes and a great variety of resources. Many of these resources provide valuable information for learners. However, it is almost impossible to maintain a wide perspective on what is happening in this medium. Therefore to the extent that browsers aid a learner in finding his or her own appropriate information, or appropriate environment for accessing that knowledge, they can be a valuable and cheap learning and training tool for professional development.

The integration of various tools within the World Wide Web, and browsers, is made possible by URLs (Uniform Resource Locators). This is a protocol for giving standardized addresses to all Internet resources. Using URLs, FTP, and WWW resources can be combined within a single environment. This makes the hyperlinked structure possible, because using the address the computer can go straight to the necessary document with only a click of a mouse. This occurs automatically regardless of the type of document. In Sum, the Internet is in the process of opening up new ways to enhance learning and training. The most obvious of its advantages is in allowing learners and trainees access to a rich variety of resources, literally at their fingertips.

2.2 E-mail

There are several options in which you can use e-mail as a training tool. For example: group discussions, trainees asking questions to their trainers, trainees talking to each other. First we want to describe the advantages of e-mail above those of a mailbox and telephone. Then we want to say something about electronic discussion group. We believe that a group discussion is a very useful training tool of e-mail.

Advantages of e-mail

The advantages of e-mail above an ordinary mailbox or telephone are numerous. Some advantages of e-mail are summarized below:

- 24 hours a day accessible: e-mail can be used by anyone 24 hours a day;
- Easy access: to access e-mail you only need an account and a computer;
- Location/time independent: trainees and trainers don't have to be in the same place or work at the same time;
- Open-entry and open-exit: anyone can enter or leave whenever they choose to;
- Independent learning: learning with the help of e-mail is a form of independent learning, because you can sit at home behind your computer alone and learn;
- Group messages: any trainee and trainer can send some information to everyone who is subscribed to the group to which you are sending the message;
- Private messages: you can also send or receive a private message or file from a fellow trainee or your trainer;
- Better content of messages: people can think about what they want to answer, so the content of each message is better than when you have to think about what you have to say during a telephone call.

Electronic Discussion Groups

One of the most useful applications of e-mail in a professional development environment is the use of group discussions. In this kind of discussion several trainees and trainers have a discussion about a subject via e-mail. A member sends his or her message to each member of the group. Other members can reflect on this message or send another message concerning the discussion. There are several points you have to consider. For example, the number of participants, the use of a distribution list, working with a moderator or not, tutor participation and where to store the messages, are all factors in the use of group discussions as professional development tools.

The size of the group is very important. If the group is too large and each participant sends messages then a flow of messages is to be read by each participant. If there are between 50 and 100 participants in the group and each participant sends a message each day, you have to read about 50 to 100 messages each day. This is too much and as a

result, participants will drop out and not want to contribute to the discussion anymore. Another problem is that it is very hard to keep up with the discussion.

Distribution list - A very useful tool for sending a message to each group member is the use of a distribution list. In this list all e-mail addresses of the group members are recorded. If a participant wants to send a message to the other participants, s/he sends the message to the distribution list. The distribution list will automatically send the message to the other participants.

For example, when I wish to send a message to all of all members of Demographers Without Borders (DWB), I send a message to demographers@yahoogroups.com and the message will be forwarded to all e-mail addresses in the list.

Moderator - A moderator is someone who, among other ways of intervening in a discussion, checks the incoming messages before they are being sent to the other participants. A moderator can fulfill several tasks:

➢ First, s/he will check the messages so that there won't be any inappropriate messages sent to the participants;
➢ Second, the moderator must try to classify each message and relate the message to a certain subtopic of the discussion. It must be clear to all participants to which subtopic a message belongs;
➢ Third, the moderator can give comments to each message to keep the discussion going;
➢ At the end of the discussion the moderator can summarize the discussion.

2.3 Multimedia Conferencing for Group Working and Learning
Besides the well-established conferencing techniques (for example, audio over the telephone and analogue video over the satellite), new techniques are in use. The Internet

and other wide-area networks supported by technologies such as ISDN and ADSL offer a relatively cheap alternative for audio- and video-conferencing.

Almost every training institution has a connection to the Internet system, already being used for e-mail, telnet, ftp, and news applications. Soon, applications which use the Internet as a backbone network for sending real-time video and/or audio, desktop multimedia conferencing will be in sight. These applications will be very cost-effective compared to CD and DVD technologies because the internet connection is very cheap (for people who are hard-linked to it) and some of these applications are freeware/shareware.

For audio conferencing only an inexpensive audio card and a microphone are needed. For multimedia conferencing, you also need a video digitizer card for the computer and a video camera. However, these costs are still small compared to regular conferencing. Perhaps the greatest advantage of multimedia conferencing on the internet is the availability of all needed information on the same desktop system. A drawback is the current bandwidth of the Internet networks.
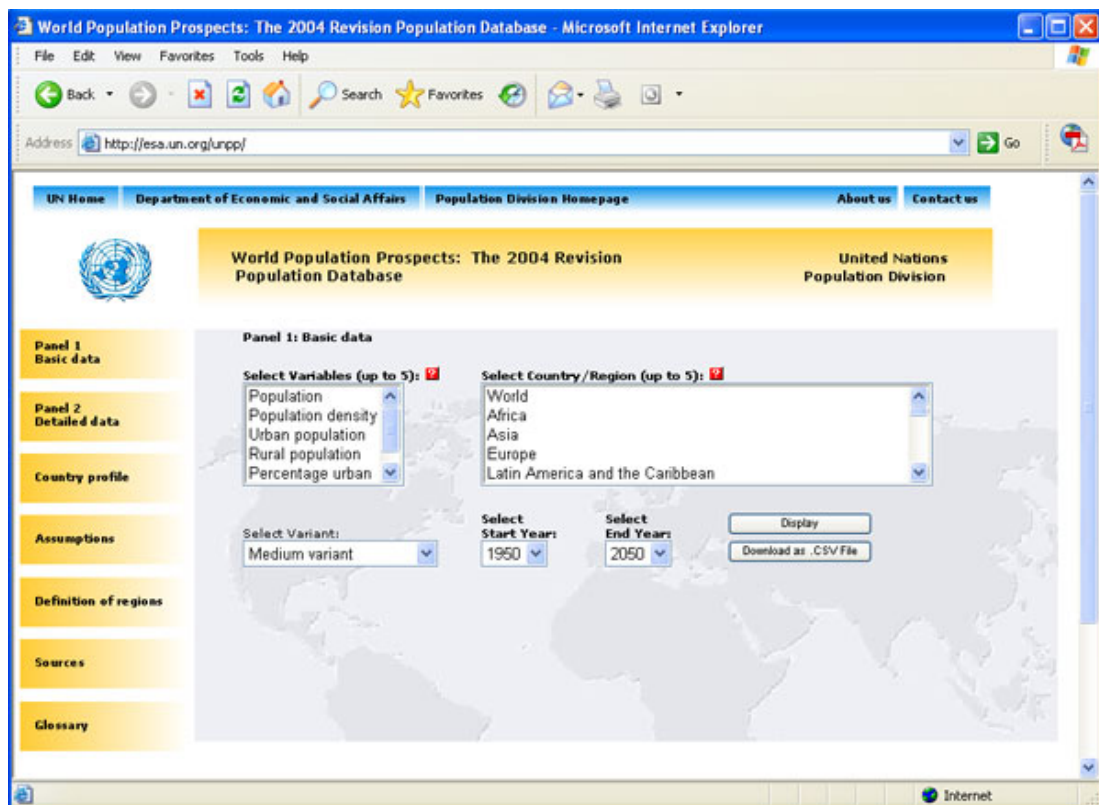
2.4 Online databases

A number of online databases are available to demographers using computer-mediated communications. In this section, two of the most common ones are presented below. You can check them out using the links provided.

United Nations: World Population Prospects (http://esa.un.org/unpp/)
The United Nations World Population Prospects is the standard source for population data. This database makes it available and easy to access UN estimates and projections of populations and their characteristics by region and country. Users can use up to five countries and five indicators at a time. The data covers a period of 100 years from 1950 until 2050. Outputs can be saved as Excel spreadsheets for further manipulation of data and producing graphical presentations.

This website is a user-friendly and easy to navigate. A glossary of terms used in the database is also available in the website. This database is highly recommended for users who seek comparative data among regions and countries. Time series of data makes it easy to track population change over time.

Figure 1: A screenshot of The United Nations Interactive Population Database

STATcompiler (http://www.statcompiler.com)

Statcompiler was developed by the Demographic and Health Survey team at Measure/DHS. It uses the available data from more than 200 Demographic and Health Surveys. The DHS STATcompiler is an innovative online database tool that allows users to select numerous countries and hundreds of indicators to create customized tables that serve their specific data needs. STATcompiler accesses nearly all of the

population and health indicators that are published in DHS final reports with just the click of the mouse.

This database is highly recommended for demographers who don't have a solid statistical background, and/or those who can not use statistical software packages such as SPSS and SAS. It is also helpful in obtaining data and country comparisons that can be used by policy makers.

2.5 mLearning

If you have a mobile phone with text messaging facilities, how do you use text message? Did you use it for learning purposes? For instance, texting a friend for advice or comment on some work? Did your trainer, coach, or instructor use it for learning or administrative purposes? Do you have Internet connection to access email and Web pages? Does your mobile allow for digital pictures and video? Do you play games on it?

Learning with mobile devices is referred to as **m-learning** or **mLearning** whereas learning with the Internet is often referred to as eLearning (electronic learning). The two major mobile devices used in education and training are Personal Digital Assistants (PDAs), which are pocket-sized computers, and cell phones, which use wireless Internet to exchange voice messages, email, text messaging, and small-sized Web pages, anywhere and anytime. Three limitations currently prevent PDAs and cell phones from replacing desktop computers: running costs, bandwidth (the rate of transferring data), and text input speed.

Mobile Phones and m-learning - The low bandwidth of most mobile phones prohibits quality video and sound. A few mobile phones can stream media but the cost is high. Grammatical text input speed is usually 10 words per minute on cell phones compared with 60 on computers. Mobile phone technology is important, but what matters most is what trainees and trainers can do with it. Mobile phones handle identity really well, whereas the internet doesn't - you have to keep typing passwords to prove who you are.

Mobile handsets are also pocketable, so you can use them almost anywhere. They offer sound and text, and now we've got pictures and video. But most of all, mobile phones are about communication. They offer two-way interaction, which is what learning and professional development should be about.

3. DEMOGRAPHERS WITHOUT BORDERS (DWB): A CASE STUDY

Demographers Without Borders (DWB) was founded in June 1999 as the first and unique e-mail group for demographers. In addition to its professional development and networking roles, DWB aims at reinforcing active participation of demographers in global affairs. It is an international network of demographers working together to close the global divide and strengthen the links between south and north. Members may post queries and comments, initiate discussions and forward conference announcements, workshops, seminars, and job vacancy announcements. DWB encourages multidisciplinary input and views.

3.1 Members:

Members of DWB live and work in 22 countries in all continents; they work in the field of demography or demography-related professions. The total number of members is 97; this number is not small compared to the small number of active demographers worldwide. In addition, new members keep joining the group regularly by just browsing the internet and locating the group website.

It is important here to mention that members are not required to submit any information about their nationality, ethnicity, or religion when joining the group; applicants are only required to show an interest on demographic studies either as student or practitioners. This is why this group is called Demographers <u>Without Borders</u>.

Messages:

Some 761 messages were sent by group members in six years since the foundation of the group in 1999. The annual average number of messages is 127, while the monthly

average is 10-11 messages. According to the code of ethics of the group, all messages should be related to the main goal of the group which is "demography". Members are advised to send non-demography-related messages directly to members who are concerned. For detailed statistics on messages posted by group member, see Table 1 below.

Table 1: Number of Messages Communicated by members of Demographers Without Borders between June 1999 and July 2005*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2005	12	8	12	8	6	19	5						**70**
2004	18	20	19	17	27	10	12	19	7	11	8	15	**183**
2003	11	7	8	21	17	4	15	16	7	15	4	9	**134**
2002	3	2	13	14	11	12	19	13	12	12	18	2	**131**
2001	4	1	6	4	5	2	2	5	6	5	6	3	**49**
2000	15	9	16	6	6	14	21	20	17	3	3	4	**134**
1999						5	9	16	16	3	1	10	**60**
Total messages communicated by the members													**761**

Source: Demographers Without Borders website http://demographers.org

3.3 Content Analysis and professional development:

One may justifiably ask: what is the content of DWB's messages and how they contribute to professional development? Content analysis of the DWB's messages reveals the fact that members communicate to achieve variant professional development goals and objectives. According to the content of messages, they can be classified as follows:

1. Exchange of research papers in PDF format or links to internet sites that contain full-text research papers;
2. Call for papers, conference announcements, workshops and seminars announcements and application forms, and new publications;

3. Drafts of publications by members of the DWB group soliciting comments and critique, and final publications;
4. Consultations on demographic analysis, techniques, demographic software, and statistical processing of demographic data;
5. Vacancy announcements and other stuff.

Many active group members assist each other in solving minor and major problems in a collegial environment. The first component which is the exchange of research papers and the fourth component, which is the consultations on demographic analysis and statistical processing of demographic data were the most beneficial components directly related to professional development.

 The composition of members of the DWB made it a unique professional development group since membership is not related to age, or years of professional experience so that it is easy to find colleagues who are specialized in all aspects of demography; for example, the group has statistical and mathematical demographers, geodemographers, social demographers, anthropological demographers, and many other specializations within the wide practicum of demography.

3.4 Group reunion

Members of the DWB group arranged many national and regional DWB reunions; in Egypt, India, and some other countries. The largest reunion of the DWB group took place in July 2005, where more than 20 DWB members have met at Tours, France in the 25th Conference of the International Union for the Scientific Study of Population (IUSSP). This was the first time for the DWB group members to communicate personally. The group members decided to have more of such events in the future in order to strengthen collegial ties between members.

3.5 Group management

The DWB group moderator (the author of this paper) practices a minimum control on incoming messages sent by group members. Only messages that contain very local content that is not relevant to other members are excluded. Messages in languages other that the language of the group (English), are also excluded. Season greetings and messages with religious or ethic content are not allowed.

4. THE FUTURE OF COMPUTER MEDIATED COMMUNICATIONS

The computer-mediated communications situation is changing dramatically as the number of connections to the Internet grows explosively. In addition to institutions, many individuals are now connected. Many people are discovering the possibilities of communicating online. The world is steadily turning into a "global village" where it is almost as easy to communicate with someone at the other side of the world as with your neighbor.

These developments offer learners/trainees/professionals more choice about what they want to learn, whenever they want to learn, and from where they want. This, in turn, requires an adapted way of thinking about training and professional development. Probably the most important issue to make multimedia communications a success is making the communication tools more available and more integrated. Virtual meeting/training courses will become more common, where in such places, all the tools you would have in a conventional meeting/training course will be available, plus the means to communicate to wherever desired.

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الإتصالات بإستخدام الحاسوب كأدوات لتنمية المهارات المهنية: "ديموغرافيون بلا حدود" كدراسة حالة

إعداد

د. أيمن زهري

الجامعة الامريكية بالقاهرة

azohry@aucegypt.edu

ملخص النص الانكليزي

تهدف هذه الدراسة الى التعريف بوسائل الاتصال من خلال الحاسوب: أنواعها و تطورها و كيفية إستخدام هذه الوسائل في مجالات التدريب و تنمية المهارات المهنية للعاملين و الباحثين كبدائل هامة و قليلة التكلفة يمكن إستخدامها لتقليل نفقات التدريب المباشر أو إرسال البعثات للخارج. و تسهم الاتصالات المرتبطة بالحاسوب كذلك في تدعيم التواصل بين الباحثين في المجالات المختلفة من أجل تبادل الخبرات و المعلومات بصورة سريعة أفضل من الاتصال الشخصي المكلف للوقت و الموارد المالية.

و في هذا السياق تتناول الدراسة بالعرض حالة مجموعة مهنية إختارت الاتصال و التواصل فيما بينها باستخدام الاتصالات بإستخدام الحاسوب ألا و هي جماعة "ديموغرافيون بلا حدود" و التي أسسها مقدم هذا البحث في العام 1999 كأول جماعة حوار ديموغرافية تستخدم الشبكة الدولية للمعلومات في مجال تنمية المهارات المهنية للديموغرافيين حول العالم.