

**GINIE: Global Information Networks in
Education
October 1995 - May 1998**

Final Report

GINIE: Global Information Networks in Education

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I. BACKGROUND

In the late 1980s and the 1990s, many countries were faced with rapidly changing circumstances and the expansion of armed conflicts in the wake of the collapse of the Soviet Union. As a result of the rapid and dramatic changes that have occurred in the last ten to fifteen years, a growing awareness developed within the international development and education communities of the importance of education in mitigating the effects of transition and crisis situations and facilitating reconstruction efforts. A group of educators and development professionals under the IMAGE Consortium (International Multi-channel Action Group for Education) created RapidEd, a working group on rapid provision of education, in 1994.

At a meeting of RapidEd in March 1995, the formation of an information repository on education in transition crisis situations, to support rapid response capability, was suggested by representatives from the Institute for International Studies in Education (IISE) at the University of Pittsburgh. At that time, IISE was working on an educational reconstruction projects in Bosnia-Herzegovina, Mongolia, and Laos, among other countries. IISE argued that many agencies have worked in countries where there is either armed conflict or a transitional situation, and these countries often have large numbers of refugees. Nowhere, however, is there a centralized repository to store and access information gained from these experiences, nor is there effective networking of professionals in these areas. Agencies that need to move rapidly into a volatile situation are constantly forced to reinvent materials and approaches due to a lack of easily accessible information about what has been done in similar situations.

The idea of forming an information repository on education provision in transition and crisis situations was endorsed by many of the conference participants as vital to the development of emergency education programs and rapid response capability.

Moreover, a consensus was formed within both RapidEd and the larger international education and development community about the need for rapid response capability, with regard to the provision of educational services, in crisis and transition situations.

As a result, support from the Center for Human Capacity Development at USAID led to the formation of the Global Information Network In Education (“GINIE”) project. GINIE was formally launched in October 1995 and has been one response to the need for education as part of development efforts in nations in crisis and transition.

II. GINIE PROGRAM DESCRIPTION

A. Mission

GINIE’s mission is to create interlocking counterpart networks that provide rapid access to documents, materials and information as well as expertise and outreach in education for humanitarian assistance and economic development in nations in crisis and transition. This mission is based upon the following assertions:

- * Solutions for basic education problems in nations in crisis and transition may occur more rapidly and efficiently if educators across the profession share their knowledge, expertise and cooperation with colleagues internationally.

- * Internet technology can help professionals work collegially in complex education environments.

B. Goals

- * To help provide governments, donor and relief organizations with on-line information, both current and historical, on crisis- and change-oriented educational services and materials; and
- * To serve as a 'virtual learning community for innovation' where lessons can be shared.

C. The GINIE Website Repository

The GINIE on-line repository currently consists of five on-line, interlocking products/activities:

- * an on-line, searchable database created by field-oriented professionals
- * webpages for crisis response education
- * e-mail 'lists' for professional networks
- * country-level webpages
- * on-line conferences

Description

The purpose of this database is to provide education professionals with access to the successful work of counterparts. Much of this quality work (tools, materials, information and expertise) is rarely available elsewhere, and often referred to as "fugitive" or "gray" literature.

The GINIE on-line searchable database uses a participatory grassroots design. This means that the database is designed to quickly respond to contributions from professionals in the field. This approach adapts rapidly both to innovative and to very complex conditions. It is particularly well-suited to education in nations where the past is often a poor predictor of the future.

Characteristics

- * On-line searchable database
- * Rapid access through text-only documents, PDF format files, full texts, abstracts and digitized objects
- * Contributor-generated index of keywords
- * Technical support for contributions
- * Multiple languages

D. GINIE Format

In addition to a repository of information and materials, the GINIE network is a metanetwork, or a network of professional networks. Each of the GINIE professional networks has a number of different options available: a) working groups; b) information distribution systems; and c) Internet websites. Networks may have access to all or some of the following:

1. An Internet website. The site provides rapid access to relevant documents, materials and links.
2. An on-line collaborative working group directly working in the area of professional interest. The group has a number of 'cybertools' to conduct their discussions, such as e-mail access through individual addresses or group lists.

III. PROGRAM-SPECIFIC WEBPAGES

A. Land Mine Awareness Education

(Miki Fukuhara, Webmaster)

Background

The necessity for a repository of land mine awareness education materials was first discussed in January 1996 during the Bosnian Education Planning Meetings at the University of Pittsburgh. These meetings were held in conjunction with the international donor-supported Program in Policy, Planning and Teacher Development for Educational Renewal in Bosnia-Herzegovina, which at that time was being conducted by the University's Institute for International Studies in Education (IISE). Indeed, land mine awareness education was initially discussed with Bosnia specifically in mind, as an estimated six million land mines had been planted during the conflict there. It was noted that in such emergency situations, rapid response and access to mine awareness education were crucial. In the midst of the war and its aftermath, however, land mine-related information was limited.

First, there was no accessibility to existing land mine awareness campaign strategies and educational methodologies. These materials as well as "lessons learned" from conflict situations had never been systematically organized for ready access by relief agencies and others. Moreover, there was a general lack of coordination and information-sharing among agencies and organizations working in land mine awareness. This lack of organization and coordination resulted in needless duplication in new crises, wasting precious time and financial resources.

With encouragement from staff at UNICEF/Bosnia and UNESCO's International Bureau of Education, GINIE rose to the challenge of creating an on-line repository of land mine awareness education information. In March 1996, GINIE's Land Mine Awareness Education program (LMAE), as this initiative became known, developed into a joint research venture with UNESCO/IBE. GINIE and IBE agreed that IBE's Department of Education for Humanitarian Assistance, headed by Gonzalo Retamal, would make available its numerous land mine-related materials for electronic publication on GINIE's nascent LMAE website. LMAE thus became GINIE's pilot program.

LMAE Webpage Contents Summary

At the end of the fourth quarter of the GINIE project, the Land Mine Awareness Education webpage contained:

Country Pages

This section comprises the largest section within LMAE. Separate country webpages were developed since most documents and materials procured by GINIE staff were country specific. Currently, there are webpages for Afghanistan, Angola, Bosnia, Cambodia, Democratic Republic of Congo (formerly Zaire), Croatia, El Salvador, Laos, Mozambique, Rwanda, Somalia, and Yemen. Each webpage contains land mine awareness education/ campaign program descriptions, experiences learned, and actual educational materials (e.g. posters, brochures and handouts).

Contact List

Begun during the third semi-annual reporting period, this a registry of over 20 experts and organizations with landmine awareness education expertise. Complete addresses are provided in all cases, while links to websites and/or e-mail have been made

wherever possible. This list also undergoes constant revision as new names and the appropriate links are made.

Emergency Response Network

This is an interactive worldwide forum of mine awareness educators, practitioners and related others. This network serves as an emergency response group who are connected to e-mail and can give quick response to field-based inquiries.

WWW Sites and References

Begun during the third semi-annual reporting period, this is a general list of over 50 landmine-related web sites.

Personal Stories

This page shares personal stories related to land mine awareness.

Highlights - First Quarter (October 1995 - March 1996)

During the first quarter, the following sections were developed on the LMAE webpage:

- * Introduction to the GINIE/IBE Collaborative on Land Mine Awareness Education
- * Land Mine Awareness: Key Concepts
- * GINIE: Land Mine Awareness Education and Campaign Materials
- * GINIE PICKS: Editor's Choices of Exceptionally Good WWW Sites on Land Mine Awareness Education
- * Other Land Mine WWW Sites and References
- * Land Mine Expertise Contact List
- * Information Distribution through E-mail
- * Personal Stories: Story 1. Blind Bosnian Teenager
- * Editor's Notes

For those without Web access or knowledge, GINIE staff also produced a research booklet in hard copy. The land mine awareness websites identified in both the webpage and the booklet were categorized as follows:

- * A Listing of International and Governmental Organizations with Land Mine Awareness Education Projects
- * Mine Clearance and Mine Clearance Training Programmes
- * Land Mine Awareness Campaigns
- * Land Mines and Politics

The GINIE booklet on land mine awareness education was used by IBE and UNICEF/Bosnia staff as a reference for exploring program options for collaborative their land mine awareness education initiatives in Bosnia. The GINIE booklet was also shared with an IBE consultant in New York, Jennifer Fisher, and served as a basis for her research activities.

Highlights - Second Quarter (April - September 1996)

The LMAE project continued to expand during this quarter. Instrumental to this expansion was the support of a variety of experts in different organizations and practitioners the field. First, Tim Grant, a landmine awareness expert, generously volunteered his services to GINIE. He shared his excellent land mine awareness educational materials developed in Cambodia, collected materials developed in Laos,

Mozambique, Angola, Namibia, Afghanistan and South Africa and gave GINIE feedback on webpage construction. Jennifer Fisher, consultant to the UNESCO/IBE LMAE team, traveled to Pittsburgh in June 1996 to bring LMAE materials for GINIE that she collected through her work with UNESCO/IBE.

Other organizations created links to GINIE's LMAE site, which was testimony to its high quality and utility. These organizations included the UNDHA de-mining data base; the International Committee of the Red Cross (ICRC); the Vietnam Veterans of America Foundation; and Stiftung Menschen gegen Minen: The Humanitarian Foundation of People against Landmines.

At the end of the second quarter, the LMAE webpage contained the following sections:

* *Country Pages*

Land mine awareness education project descriptions and actual materials from Afghanistan, Angola, Bosnia, Cambodia, El Salvador, Laos, Mozambique, Rwanda, Somalia, Yemen, and Zaire.

* *Experts* (Contact List of experts in the field and Job Search Bulletin Board)

This was a registry of experts and contact list of organizations who dealt with land mine awareness education and land mine-related activities.

* *Land Mine Awareness Education Emergency Response Network /Forum*

This was a worldwide interactive forum and network of mine awareness educators, practitioners and related others. It supported an Emergency Response Group, who were connected to e-mail and able to provide rapid responses to field inquiries on mine awareness education.

* *Related World Wide Web (WWW) Sites and References*

This consisted of on-line resources and bibliography on land mine awareness education and land mine related issues.

Highlights - Third Quarter (October 1996 - March 1997)

From October-December 1996, Miki Fukuhara, the GINIE Research Associate in charge of LMAE, worked in Geneva as GINIE liaison to IBE/Education for Humanitarian Assistance Division. LMAE website development continued during her tenure there. LMAE-related activities during the third quarter were as follows:

Home Page

- * revised LMAE program design
- * added approximately 20 more WWW related links and checked on reliability of existing links
- * added a LMAE Expertise Contact List to the website
- * put up a Job Search Bulletin Board
- * monitored Emergency Response Network

Country Page Development

Bosnia

- * supplemented Experience Learned Page
- * supplemented most recent materials developed in Bosnia by UNICEF, UNESCO/IBE and UNHCR with descriptions

- * collected other materials relevant to land mine awareness, e.g. comic books and posters

Cambodia

- * collected a variety of country-specific materials: landmine awareness project descriptions; LMAE curricula; over 30 additional pictures on LMAE, brochures, T-shirts, an educational game; current situation reports and papers written by field practitioners
- * also collected a landmine project contact list

Laos

- * organized receipt of educational materials both in Pittsburgh and Geneva, which included over 10 UXO/Lao work plans, posters, brochures, T-shirts, and pictures
- * constructed and supplemented webpage with descriptions on most current situations in Laos, mine awareness project information, and curricula

The following country pages were revised and supplemented with more materials: Afghanistan, Angola, El Salvador, Mozambique, Rwanda, Somalia, Yemen, and Zaire.

External Relations (Geneva-based)

- * Presented GINIE LMAE activities at the United Nations High Commission for Refugees (UNHCR).
- * Presented LMAE Homepage at the International Conference on Education at IBE.
- * Provided information support to LMAE field practitioners in Cambodia and Laos using e-mail and fax.
- * Provided and supported over 40 general information or land mine-related inquiries.
- * Started LMAE Emergency Response Network, which included experts from Angola, Austria, Australia, Canada, Croatia, France, Holland, Japan, Laos, New Zealand, Norway, Mozambique, Tajikistan, Thailand, Switzerland, UK and USA.
- * Met with ICRC land mine advocacy media coordinators.
- * Discussed LMAE webpage and database construction with counterpart at ICRC.
- * Discussed LMAE with UN Human Rights Web webpage construction team.

At the end of the third quarter, the LMAE webpage included the following:

- * A repository of land mine awareness education materials, project descriptions, and lessons learned from Afghanistan, Angola, Bosnia-Herzegovina, Cambodia, El Salvador, Laos, Mozambique, Rwanda, Somalia, Yemen, and Zaire.
- * An interactive forum, the Emergency Response Network, of mine awareness educators, practitioners and related others worldwide.
- * A registry of experts and contact list of organizations with land mine awareness education expertise and land mine related activities/resources.
- * An on-line resources and bibliography on land mine awareness education and land mine related issues.

Highlights - Fourth Quarter (April - September 1997)

One of GINIE's original projects, the LMAE website continued to be developed and maintained. As highlighted below, between April and September 1997, several country webpages were further developed within LMAE as new documents and materials were procured and put on-line.

LMAE-related activities during this reporting period were as follows:

Country Page Development

Afghanistan

This page contained land mine awareness education/campaign descriptions and actual materials developed by the Organization for Mine Clearance and Afghan Rehabilitation (OMAR), the Afghan Campaign to Ban Landmines, and UNICEF/Afghanistan. At the end of this quarter, we were awaiting more information from Save the Children.

Cambodia

GINIE staff continued to collaborate with Tim Grant, who developed numerous landmine awareness education materials for Cambodia. This work was done in conjunction with the Mine Awareness Training Team (MATT), the Cambodian Mine Action Centre (CMAC), and the Landmine Awareness Programme (LMAP). Descriptions and photographs of these materials were procured from him and put into the GINIE LMAE website. These included such general landmine awareness promotions as tee shirts, posters, games, leaflets, and a mobile information display. Others were designed as visual literacy materials for teaching landmine awareness and include silk screens depicting the six most commonly found mines in Cambodia, prodding lessons, and mine displays.

Croatia

Croatia/UNICEF agreed to collaborate with GINIE by sending additional landmine-related materials as they are developed and become available. It was anticipated that documents and other text would be sent as attachments via e-mail once UNICEF/Croatia obtained the requisite on-line capacity.

The new country pages listed above were added to existing LMAE country pages for Angola, Bosnia, Democratic Republic of Congo (formerly Zaire), El Salvador, Laos, Mozambique, Rwanda, Somalia, Yemen.

B. Program in Emergency Education for Reconstruction (PEER)

(Sera Kariuki, Web designer)

Background

A second initiative begun in the early stages of the GINIE project was UNESCO's very successful PEER program, which is based in Nairobi, Kenya. PEER began its existence in Mogadishu under UNESCO/Somalia in January 1993, when an education development center was set up to bring together and reintegrate trained Somali educators into their specialized work. Subsequently, the program expanded to the rest of Somalia, northwest Somalia (now Somaliland), and to refugee camps in Kenya, Djibouti, Yemen and Ethiopia. During the 1994 Rwandan crisis, PEER expanded its operations to Rwanda and refugee camps for Rwandans in Tanzania and Zaire. PEER expertise was occasionally shared, on demand, in areas outside of the program's operations, including refugee camps in Eritrea, Angola, and Southern Sudan.

PEER has collaborated closely with UNICEF, UNHCR and other organizations to develop appropriate strategies, in line with regional capacity, for response in the area of education and humanitarian aid. Some components of the PEER project are Teacher Emergency Packages, reconstruction of the curriculum, health education campaigns, mine awareness campaigns, teacher training, and adult literacy programs.

In March 1996, members of GINIE staff presented a paper at the annual meeting of the Comparative and International Education Society in Williamsburg, Virginia. This paper focused on UNESCO's field experience and used East Africa as a case study. Upon their return to Pittsburgh, GINIE staff determined that the materials from the PEER

project would be worthwhile to include in the GINIE website. A new webpage for the PEER project was established at the end of GINIE's first quarter.

PEER Webpage Contents Summary

To date, the PEER webpage has over 50 documents, posters, and videos. At the end of the fourth quarter of the GINIE project, the PEER webpage contained:

Background Documents

Materials in this section cover a variety of background information such as: how and when PEER began its existence, its mission and mandate, principles and policies, the project's methodology, specific activities, products, and outcomes. Also included is a document outlining UNESCO's strategic options in rehabilitating and reconstructing the educational system in post-war Somalia and the roles of such things as Local Education Authorities (LEAs), Education Development Centers (EDCs), Curriculum Development Centers (CDCs), Somali Open Learning Units (SOMOLU), and the Teacher Emergency Package (TEP). Training and workshops as well as the process of re-writing, editing and re-printing of texts and guides, all of which had been destroyed in the war, is presented.

Country Reports

This section is reserved for critical analyses of issues and problems involved in the reconstruction of educational systems. A detailed report of the Somalia case has been acquired thus far.

Curricula

This section describes the various teaching tools promoted by PEER. These include posters, TEPs, and a variety of textbooks, usually in such local languages as Somali and Uduk. Also included are video and cassette teaching projects such as "Drop The Gun," a musical within the Education for Peace Campaign, which is a PEER initiative.

Logistics

The manual in this section describes PEER's process of program management, field assessment of technical needs, requirements for writing quarterly work plans, coordination of various projects, financial facilitation, evaluation and implementation. This manual also outlines UNESCO's reporting system.

NGOs

Peer conducts most of its work in collaboration with a number of intergovernmental and nongovernmental organizations, including UNICEF and UNHCR. In this section, some of the work of the various NGOs is showcased.

Teacher Training

PEER conducts extensive teacher training programs. Documents describing some of these were provided to GINIE. Examples include the Environment Education Program Training of Trainers Manual and accompanying classroom materials. This document presents a methodology that heavily depends on questioning skills and an open approach to cognitive development. There is also a description of SOMOLU, which is part of UNESCO's overall strategy for the rehabilitation of the education sector in

Somalia. At the time SOMOLU documents were collected by GINIE, it was the only on-going distance education activity in Somalia.

UNDOS

Due to the war in Somalia, and the subsequent destruction, there was the need for some sort of repository to store as much information on Somalia as possible. This need was fulfilled by the United Nations Development Office for Somalia (UNDOS). Its documentation unit established a regionally-organized hard copy storage system that focuses on UN and NGO activities in Somalia. UNDOS procured project documents from donor agencies and created a database of logistical information. The European Commission, United Nations, and U.S. Agency for International Development also shared project documents they were funding at that time. These documents have been included in the GINIE database because sharing them promotes the spirit of information exchange that is critical to nations in crisis and transition.

Highlights - Second Quarter (April - September 1996)

GINIE requested more PEER documents from the field, which were anticipated to be useful to people working in emergency education in other parts of the world. Specifically, GINIE sought to obtain the emergency packages, teacher training materials, and adult literacy materials that had been designed specifically for the PEER program. GINIE also sought to obtain descriptive information on the process of retrieving national curriculum materials and the revising, updating and rewriting of them after a war.

GINIE staff undertook to locate funding for the creation of a GINIE node site in Nairobi. At the same time, GINIE staff began the process of creating a network of NGOs, IGOs, governments, educators, researchers, and others in the field of education for African nations in crisis.

In the summer of 1996, PEER invited GINIE Research Associate Sera Kariuki to Nairobi to field-test the GINIE system and facilitate the collection of materials relevant to GINIE. She returned to Pittsburgh with a variety of documents provided by PEER staff.

Highlights - Third and Fourth Quarters (October 1996 - September 1997)

The primary activity which occurred during this reporting period was to edit the remaining PEER documents, which had been sent to GINIE on diskette. This proved to be a labor-intensive effort since document formats were incompatible. Once edited, these documents were entered into the database and put on-line. Despite the difficulty encountered with the PEER diskettes, however, all remaining diskettes were finished. The PEER webpage design was also modified during this time. This included expanding the categories under which PEER-related documents can be accessed.

C. Education for Peace and Reconciliation

(Miki Fukuhara, Web designer)

Background

GINIE's project on Education for Peace and Reconciliation (P&R) was initiated at the end of the second quarter. P&R was a joint effort of GINIE, UNESCO/IBE, UNHCR and UNICEF. It began in September 1996 in Geneva during GINIE Research Associate Miki Fukuhara's tenure as GINIE liaison with the Education for Humanitarian Assistance Division, IBE. One of her tasks was to undertake the development of an Education for Peace and Reconciliation website under GINIE. These webpages were intended to

provide information about conflict resolution and peace education, especially in countries where programs on these topics have been implemented due to civil strife.

P&R Webpage Contents Summary

At the end of the fourth quarter of the GINIE project, the Peace and Reconciliation webpage contained:

- * Separate country webpages for Burundi, Lebanon, Liberia, Mozambique, Rwanda, and Somalia. Specifically, each webpage contains P&R project descriptions, experiences learned and actual educational materials (e.g. curriculum, methodologies, and handouts).

- * P & R and Conflict Resolution General References on Educational Materials
This reference list contains materials developed in the United States, England, and Northern Ireland. Material descriptions and complete addresses are also provided.

- * Links to other WWW sites relevant to P&R.

The following webpages were still under construction:

- * Expertise Contact List

- * Information Distribution through E-mail and Editor's Notes

Highlights - Second Quarter (April - September 1996)

By the end of December 1996, Ms. Fukuhara accomplished the following web-related and outreach tasks on behalf of GINIE:

A. Researched and collected materials on P&R. This included materials from Lebanon, Burundi, Liberia, El Salvador and the Philippines. Other general documents on conflict resolution and peace education from the UNICEF Documentation Center and UNICEF Education for Development division were also gathered.

B. Researched and collected information from various countries on tolerance in films and other peace education materials in general at UNESCO headquarters in Paris.

C. Put up Peace and Reconciliation and Conflict Resolution General References on Educational materials.

D. Scanned documents and materials on P&R at UNHCR Documentation Center.

E. Searched WWW sites for P&R information.

F. Attended peace education meetings at UNICEF/Education for Development Division and UNHCR.

Highlights - Fourth Quarter (April - September 1997)

Staff changed the webpage design for each country page so they would have the same format as GINIE's Land Mine Awareness Education webpages. GINIE staff also updated and/or revised material and monitored web links to other sites.

D. Inter-Agency Working Group (IAWG)

Background

In May 1996, IBE created the Inter-Agency Working Group (IAWG) in order to coordinate educational efforts in complex emergencies and improve emergency educational responses. Indeed, the fundamental rationale behind IAWG is to prevent haphazard, multiple responses to the educational needs of nations in crisis. Specifically,

IAWG proposes a planned response and action strategy with ready access to a clearinghouse of information, materials, knowledge, evaluations, and experience. A collaborative effort between GINIE, IBE and USAID, which began during the project's second quarter, led to the creation of a web page that reflected the objectives and tasks of the working group and agencies engaged in education in humanitarian assistance. Efforts were soon underway to facilitate contacts for this group through the development of a special listserv.

Dr. Maureen McClure, GINIE Project Director, traveled to Geneva in June 1996 to work with IBE staff on the development of GINIE's key role in the Interagency Working Group. She also attended the 1997 meeting in Geneva.

IAWG Webpage Contents Summary

At the end of the fourth quarter of the GINIE project, the IAWG webpage contained:

- * Interagency Consultation on Humanitarian Assistance and Refugees Report
- * A summary report on the Inter-Agency Consultation Meeting on Education for Humanitarian Assistance and Refugees (held in Geneva from May 9 - 11, 1996)
- * Notes from a panel discussion on the agency presentations and working group papers
- * A list of conference participants
- * A contact list of over 120 NGOs, with links to approximately 30 organizations

Highlights - Third Quarter (October 1996 - March 1997)

During the third quarter, GINIE staff provided technical support to the IAWG by developing an IAWG webpage and setting up a semi-secure conference system and a listserv for this group to confer with each other quickly and efficiently.

For the conferencing, GINIE added a site security enforcement mechanism, which is a simulated fire wall setup for preventing unexpected intruders.

Highlights - Fourth Quarter (April - September 1997)

During this reporting period, GINIE staff compiled and put on-line an extensive contact list of over 120 NGOs working in the areas of education, relief, and international development. Links have also been made to the approximately 30 organizations on the list who have websites.

E. Bosnia Program for Educational Renewal at the University of Pittsburgh

Background

At the time of GINIE's inception, the Institute for International Studies in Education (IISE), had a technical assistance project with UNICEF in Bosnia. Through this project, The Program for Policy, Planning and Teacher Development for Educational Renewal in Bosnia Herzegovina, IISE developed several documents of use to policy makers, administrators and teacher trainers in Bosnia. GINIE staff determined that these documents could serve as the basis for a new Bosnia webpage. Indeed, these documents make up the core of GINIE's Bosnia initiative.

Bosnia Webpage Contents Summary

At the end of the fourth quarter of the GINIE project, the Bosnia webpage included the following sections:

Country Profile

This section contains links to information about culture, economy, government, history, language, maps, news, people, transportation, and weather.

Recovery and Growth in Education

A variety of documents pertaining to educational policy and planning, higher education, and teacher development have been abstracted and/or made available in the GINIE database.

Educational Organizations in Bosnia-Herzegovina

This is a list of university-related organizations in Sarajevo.

Contact List

Names, addresses and other contact information are provided for UNICEF staff and University of Pittsburgh faculty and others who are either currently in Bosnia-Herzegovina or have developed expertise in some area(s) of Bosnian education.

Highlights - First Quarter (October 1995 - March 1996)

In addition to project-related documents, GINIE put on-line e-mail "postcards" that were solicited from faculty who traveled to Bosnia for the UNICEF project. Also available through GINIE is a Voice of America interview with Srebren Dizdar, Permanent Secretary to the Ministry of Education in Bosnia. GINIE maintains fourteen copies of this sixty minute taped interview with Roseanne Skirble made at the University of Pittsburgh on Saturday, February 3, 1996. It summarizes conditions for education in Bosnia, and is being made available through GINIE. Links to other sites dealing with Bosnia, worldwide, are listed as well on the Bosnia page. Site information quickly became obsolete and was deleted and replaced.

Highlights - Second Quarter (April - September 1996)

In June 1996, IISE was awarded a technical assistance project through the World Bank. This project, entitled Participatory Planning for Renewal of Teacher Education in Bosnia and Herzegovina, developed partnerships in three ways: a) use of GINIE expertise for teaching, advising and policy analysis; b) use of GINIE's outreach networks; and c) use of GINIE's archival systems and production facilities.

Highlights - Third Quarter (October 1996 - March 1997)

IISE, continued to work on technical assistance projects in Bosnia with UNICEF and the World Bank. GINIE contributions to the Bosnia project during the third quarter included the following:

1. World Bank Project in Bosnia-Herzegovina

The GINIE directors provided technical assistance and support for the World Bank project for Participatory Planning for Renewal of Teacher Education in Bosnia and Herzegovina from August 1996 to June 1997. The project brought together education leaders from each canton to develop a professional network that linked Bosnian Muslim and Croat educators. The project also supported the creation of the first working professional network linking the Federation's Ministry of Education with educational leaders in each canton, including the ones in the former Herceg-Bosnia. At that time, education was the only sector within the Federation that had achieved a working relationship across all cantons, including those in the former Herceg-Bosnia.

In October 1996, fourteen Bosnian Muslim and Croat educational leaders from the Federation came to Pittsburgh to develop participatory planning skills. GINIE faculty provided technical assistance in the form of an issues paper that provided a Bosnian context for collaborative planning, which had been mandated by the Dayton decentralization policy. GINIE staff also taught seminars, provided computer instruction,

arranged school site visits and extended the U.S./Bosnian education professional network (Apollonet) to four new schools.

It was agreed between GINIE and IISE that GINIE would be used as the Internet dissemination vehicle for project archives and would provide technological assistance when needed. GINIE's role thus became one of networking and dissemination in support of the maintenance of the working relationship across cantons.

2. Bosnia Education Working Group (BEWG)

On October 29, 1996, USAID sponsored a meeting for donor partnerships for investment in education in Bosnia-Herzegovina. Attending the meeting were representatives from the Embassy of Bosnia-Herzegovina, the Embassy of Japan, the Open Society Institute (Soros Foundations), the Bosnia-Herzegovina National Commission of UNESCO, the Education Cluster/UNICEF, USAID (the Center for Human Capacity Development; the Cross Cutting Issues, Program and Policy Coordination Bureau; the Office of Population, Health and Human Development; and the Bosnian Coordination Office), USIA (Eastern European/NIS Affairs Office, and the USIA Balkans Desk), the Center for Civic Education, and the World Bank.

The Bosnia Education Working Group (BEWG) was founded as a result of this meeting. From November 1996 - January 1997, GINIE provided technical support to BEWG.

Specifically, GINIE designed a semi-secure website for BEWG with a firewall which contained an e-mail list, contact information, a series of on-line conferences, a library of GINIE and Internet resources, and a children's art gallery. The site developed a "magazine" format as a prototype for other sites. The site was dismantled in August 1997 as it was to be reconstructed as a public site.

3. UNICEF/Bosnia: Active Learning Project

The active learning project was a major effort to train teacher educators in new pedagogical methods developed in the U.S. that were particularly well-suited to post-war Bosnia-Herzegovina. Bosnian teacher educators requested training in active learning as a method to enhance critical learning skills and support the many children suffering from post-war trauma. Steve Koziol of the University of Pittsburgh, in partnership with the Pedagogical Academy in Sarajevo, created a professional network through a series of training workshops and modules in Bosnian and English. He also designed a low-cost method for introducing new pedagogical research through the development of a series of short Bosnian "reader-friendly" technical papers. Written by U.S. experts, these papers could be translated within the Bosnian cultural context and widely copied and distributed, thus avoiding high publication costs.

GINIE was asked to serve as the dissemination vehicle for this project. GINIE faculty and staff were also invited to contribute a technical paper on the establishment of an "education information highway" in Bosnia-Herzegovina that would help the country build human and information capital by linking education professionals to each other and education professionals internationally.

F. Trauma and Disability Education (TDE)

Webpage research and development

This new web page is an outgrowth of GINIE's Landmine Awareness Education web page (LMAE) which aims, in part, to raise public awareness of the devastating effects of wars on children. Specifically, TDE was created to provide information about educational support for children in crises who are suffering from 1) developmental

delays; 2) physical disabilities, especially children who are amputees as a result of landmines; and/or 3) psycho-social disorders, especially in adolescents. Central to the development of this website has been to the identification of and collaboration with medical and educational specialists at the University of Pittsburgh.

Specialty areas to date include

- * developmental delays
- * post-traumatic stress disorders in youth
- * child speech and language disorders
- * adolescent/young adult anxiety, depression, and suicide
- * visual impairments

This collaboration has been a two-pronged effort. First, professional expertise has been sought with regard to the types of materials that GINIE should solicit and from whom, both within the University and elsewhere. GINIE/TDE has successfully procured training materials authored by University faculty in speech and language disorders, child psychiatry, and trauma in women and children. Additional materials are to be forwarded as they become available.

The second collaborative effort between GINIE/TDE and University of Pittsburgh medical staff is the establishment of a helpline within the disability website. This helpline would likely be an on-line chat room and/or discussion group and is intended for parents and teachers worldwide. Several specialists have agreed to serve as resource persons for the helpline. As such, they will monitor and answer the questions posed. The assistance of others professionals is currently being sought.

TDE Webpage Contents Summary

Occurring simultaneously with document procurement has been the establishment of TDE webpages and numerous links to related sites. The orientation page presents each of the topic areas that can found within TDE. Each topic area contains a brief rationale for its inclusion in TDE and a list of links that have been carefully researched and selected because of their particular relevance.

The first topic area, Developmental Disabilities, has been divided into the following categories, each with a series of links:

- * General category of disability
- * International Organizations
- * American Organizations
- * University Research Centers
- * International Conferences
- * Projects
- * Help Sheets

The second topic area, Post-Crisis Children's Psychological Disorders, has been divided into the following categories, each with a series of links:

- * Questions & Answers
- * Mental Health Help Sheets
- * Trauma Help Sheets
- * Treatment Manual
- * PTSD Conferences
- * Trauma Mailing Lists

- * Projects
- * American Organizations
- * International Organizations
- * Other Valuable Links

The third topic area, Children and War, provides links to a series of documents, brochures, and news reports published by

- * UNICEF
- * UNHCR
- * Casa Alianza/Covenant House
- * The Children in War Campaign/UK
- * The International Committee of the Red Cross
- * Mediciens Sans Frontieres

Downloading free software for people with disabilities

GINIE staff believed TDE would be incomplete without providing ways for people with disabilities to gain access to computer and Internet technology. In response, TDE includes a free shareware and software page, which contains links to various free shareware and software for users with disabilities. This makes it possible for the visually impaired and others to use personal computers and gain access to the World Wide Web. Other software provides instruction in constructing accessible web pages. GINIE's Free Shareware and Software page has been divided into the following categories, each with a series of links:

- * Accessible Web Pages
- * Assistive Technology Centers
- * Computer Access Programs
- * Freeware for Macs
- * Freeware for Windows
- * Freeware for DOS
- * Funding Resources
- * Projects

Future Goals

GINIE staff would like to broaden topic areas within TDE in the coming months to make it more useful to doctoral students and professors at the University of Pittsburgh and elsewhere. This could in part be based upon the results of a survey of University of Pittsburgh clinicians and others to more fully determine their needs for on-line information.

G. Crisis Links

During the fourth quarter, GINIE staff developed an updated web page, "Crisis Links," which is a comprehensive list of useful links to a variety of organizations devoted to refugee assistance, disaster relief, conflict resolution, and related topics. To date, approximately 55 links have been created.

IV. GINIE OUTREACH

GINIE outreach activities have been conducted to enhance its visibility and increase GINIE's network of contacts worldwide. The following summarize GINIE outreach and illustrate a variety of domestic and international efforts.

A. Presenting the GINIE Project -- A Chronology of Events

December 1995: GINIE staff attended a UNESCO-sponsored international conference of international library and information science experts. The conference was held at the University of Pittsburgh's School of Library and Information Sciences. The GINIE team presented a PowerPoint display of the GINIE project, which was then in its formative stage. This forum provided a mutually beneficial opportunity for networking, as conference participants asked to be kept informed about future GINIE developments, while GINIE developed an invaluable list of worldwide contacts. Establishing links to these information specialists was especially valuable because, in the future, they could be some of the primary users or facilitators of Internet access and knowledge in their countries.

January 1996: IISE hosted a series of meetings at the University of Pittsburgh with representatives from USAID, UNICEF, the World Bank, the Bosnian Ministry of Education and other parties interested in Bosnia. GINIE demonstrated its on-line activities at these meetings, which introduced many key staff people from both the international donor and NGO communities to GINIE.

Also in January 1996, Drs. Seth Spaulding and Noreen Garman and Helen Boyle presented GINIE at IBE in Geneva.

March 1996: GINIE staff attended the Comparative and International Education Society's annual meeting in Williamsburg, Virginia. GINIE staff developed and presented a total of three panels, two on education in nations in crisis and one on education in nations in transition. University of Pittsburgh faculty and graduate students prepared presentations for these panels, which also included representatives from IBE, USAID, the Academy for Educational Development, and Education Development Center.

April 1996: Dr. Maureen McClure, GINIE Director, and Patrick Tse, GINIE Project Manager, presented GINIE at a USAID-sponsored seminar at the U.S. State Department. (See Appendix A: GINIE Outreach.)

May 1996: Dr. Maureen McClure presented two GINIE-related lectures at the National Academy for Educational Administration in Champing, China as part of an Asian Development Bank project. (See Appendix A: GINIE Outreach.) She was also invited to discuss GINIE with the Chinese National Institute for Educational Research in Beijing.

June 1996: Dr. Maureen McClure held GINIE discussions with the World University Services/Austria at the University of Graz.

Also in June 1996, Dr. McClure visited IBE in Geneva to discuss GINIE/IBE collaboration. (See Appendix A: GINIE Outreach)

August 1996: Dr. Maureen McClure discussed GINIE with the Soros Foundations-sponsored Management Information Technologies Center in Sarajevo. Talks began to explore the possibility of a GINIE mirror site in Sarajevo.

September - December 1996: Miki Fukuhara made GINIE presentations in Geneva at UNHCR and IBE and had GINIE-related discussions with ICRC and other agencies involved in landmine awareness.

March 1997: The Research and Reference Service Project of USAID's Center for Development Information and Evaluation sponsored a Development Dialogue session on "Education in Crisis Situations" with Dr. Emily Vargas-Baron, USAID/G/HCD and Dr. Maureen McClure at the USAID facilities in Rosslyn, Virginia. This session provided the opportunity to introduce GINIE to a wider group of USAID professionals.

May 1997: Lin Ming-Kuen presented GINIE at the National Changhua University of Education in Changhua, Taiwan and discussed the establishment of a mirror site. Also in May 1997, Dr. Maureen McClure presented GINIE at UNHCR headquarters in Geneva. (See Appendix A: GINIE Outreach)

June 1997: Dr. Maureen McClure discussed GINIE at the Soros Foundations' Open Society Fund, Bosnia-Herzegovina, and the British Council.

October 1997: Dr. Maureen McClure held GINIE discussions at USAID/Sarajevo as part of a presentation on website construction. She also met with UNESCO/BiH and the Soros Foundations/BiH and the MIT Center.

January 1998: Dr. Maureen McClure presented GINIE at the UNESCO/Iraq office in Baghdad.

B. Partnerships

1. UNESCO/International Bureau of Education (IBE)

As a result of GINIE Associate Helen Boyle's January 1996 visit to Geneva, Dr. Gonzalo Retamal of UNESCO/IBE was invited to Pittsburgh and Williamsburg, VA, where he attended the annual meeting of the Comparative and International Education Society in March 1996. At this meeting, Dr. Retamal served as a panelist on the University of Pittsburgh-sponsored Nations in Crisis panel. Dr. Retamal's U.S. visit also resulted in a more formal agreement of collaboration and cooperation.

Indeed, two of GINIE's largest and most successful programs, Land Mine Awareness Education and PEER, can be attributed to the close working relationship that developed between GINIE and personnel from UNESCO and IBE. (See Sections III-A and III-B of this report.)

2. UNICEF/Bosnia

UNICEF/Bosnia, under the direction of Robert Fuderich, collaborated with UNESCO/IBE and GINIE in the development of the Land Mine Awareness webpage. Specifically, UNICEF staff helped design the webpage, and donated materials to be put on-line. GINIE and UNICEF/Bosnia were joined in a second collaboration by the Bosnian Ministry of Education. GINIE provided technical assistance to the project and agreed to act as archivist.

3. World Bank

GINIE also joined in a partnership with the World Bank and the Bosnian Ministry of Education. Specifically, GINIE provided technical assistance to the project and agreed to act as archivist.

4. The Soros Foundations

In collaboration with Soros and the Bosnian Ministry of Education, GINIE agreed to act as archivist for documents from the first post-war national education conference in Bosnia-Herzegovina held in June 1997.

In July 1998, the Soros Foundations sponsored the Pittsburgh visit of Zlatan Sabic, Deputy Director of Soros' MIT Center; Dragan Ivanovic, Information System Specialist

with the MIT Center; and Azur Ajanovic, Soros' Internet/Automation Coordinator for Bosnia-Herzegovina. The trip's purposes were to 1) learn about GINIE; 2) discuss the establishment of a mirror site in BiH in return for an MIT mirror site as part of GINIE; and 3) establish the first GINIE/Soros telecourse through the MIT Center.

5. The Brothers' Brother Foundation

The Brothers' Brother Foundation, headquartered in Pittsburgh, has a long-standing record for delivering high quality goods for relief efforts. They were very active in supporting humanitarian relief efforts in the former Yugoslavia that had been partially funded by many groups based in the Pittsburgh region. During the second quarter of the GINIE project (April - September 1996), Brothers' Brother worked with GINIE and the Croatian Fraternal Union, also headquartered in Pittsburgh, to deliver a container of encyclopedias to both Muslim and Croatian communities in Bosnia-Herzegovina. Brother's Brother also decided to offer its support in the packaging and distribution of usable computers for children in Bosnia-Herzegovina. As part of GINIE outreach, GINIE staff explored ways of assessing computer needs in Bosnia and then putting together packages of computer equipment, software, training and service. It was decided that the infrastructure, training and maintenance capacity was still too weak for adequate 'digestion' of hardware.

During the third quarter of the project (October - March 1996), and as a follow-up to the Bosnian Muslim/Croat October 1996 meeting at the Croatian National Federation during the World Bank project, GINIE worked with Brothers' Brothers Foundation to ship 31,000 high quality, recent college textbooks that were offered by a U.S. publisher. Over 100 hours were invested on both the U.S. and Bosnian sides to ensure secure delivery, but, in the end, neither side could ensure that shipment could securely pass the Croatian/Bosnian border without harassment or excessive taxation. Unfortunately, the books were instead shipped to the Philippines.

6. Apollonet

GINIE also worked to develop outreach programs between schools in the Pittsburgh area and schools from nations in crisis or transition. The goal was to provide links between university students, faculty members, associates from the education community and people working in nations in crisis, recovery and transition.

In October 1996, Apollo-Ridge High School in Armstrong County, PA hosted the World Bank-sponsored visit of Bosnian educators, as a follow-up to an earlier visit by Dr. Dizdar, which had been arranged by UNICEF/BiH and GINIE. Apollo teachers shared their active learning, interdisciplinary and community-oriented curriculum projects with their BiH counterparts.

Dr. Dizdar promised to find another school with e-mail links to GINIE, as the one originally identified had problems making connections. Apollo agreed to follow through by collecting and sending materials about its curriculum projects to Bosnian counterparts.

As a follow-up, GINIE applied with the University of Pittsburgh's School of Information Sciences for a state grant to help make Apollo's teacher-created materials available online.

UNICEF/Bosnia offered to make introductions for Apollo educators to UNESCO's Associated Schools Project. (See PEN-DOR project below.)

Apollonet now includes ten schools in Western Pennsylvania and has established partnerships with educational institutions in Bosnia-Herzegovina, primarily through the Pedagogical Academy and the Druga Gymnazija in Sarajevo.

Another Apollonet school, Hampton, is hosting a high school senior from Tuzla, who is also the national javelin champion.

7. The Pennsylvania Education Network Digital Object Repository (PEN-DOR)

PEN-DOR began as a two-year, \$200,000 initiative in the Department of Information Sciences and Telecommunications at the University of Pittsburgh's School of Information Sciences. It is sponsored by the Pennsylvania Department of Education through its Link2Learn education and technology grants. PEN-DOR's purpose is to develop a sustainable digital library for Pennsylvania K-12 public schools through a professional "community memory" that can be shared with colleagues working internationally in physically remote sites. In March 1998, PEN-DOR was extended for another year and funded for \$423,000.

PEN-DOR is working with Apollo Ridge High School in Apollo, PA because of its GINIE-affiliated professional communications network of teachers and students in Western Pennsylvania and other countries (notably Bosnia-Herzegovina and China. Other partners include: Common Knowledge (a K-12 network testbed, partially funded by the National Science Foundation); Oryx Press; Object Design and Galt Technologies/Intuit, Inc.; and Apple Computing, which has agreed to share 1,000 educationally-oriented Java applets, which are small, easy-to-use computer programs designed to run on any computer system.

The GINIE partnership with PEN-DOR, it is envisioned, will enable educators to access, utilize and add to a collection of lesson plans, digitized slides, photographs, video clips, community comments, state and federal standards, school district policies and procedures, and references and training manuals.

8. The Andy Warhol Museum

During the summer of 1997, GINIE staff began their collaboration with the Andy Warhol Museum in Pittsburgh by co-sponsoring an event within the New Community Forum, a monthly discussion series on items of social responsibility in the popular culture.

Students in a Warhol program e-mailed students in Sarajevo.

9. China National Institute for Educational Research (CNIER)

As a follow-up to the presentation of GINIE at CNIER in May 1996, Dr. Maureen McClure twice met with the Director of International Programs, Professor Zhor Nanzhao. First, in August 1996 at the University of Buffalo, she demonstrated the Internet capabilities of GINIE. Second, in March 1997, during a meeting of the American Education Research Association in Chicago, Drs. McClure and Zhor discussed possible linkages with Ed Grazert and the I*Earn project.

In May 1998, Guo Boliang, a policy analyst from CNIER, spent three days visiting the GINIE program to learn about GINIE's operations, with a special interest in disabilities education.

In July 1998, Dr. McClure and Professor Zhou held a teleconference during his stay at Rutgers University. They discussed GINIE's telecourse initiative with the MIT Center in BiH and its possible extensions in China. Professor Zhou was invited to participate in the courseware demonstration.

10. National Academy for Educational Administration (PRC)

Three Asian Development Bank-sponsored scholars from NAEA, Guo Feng, Wang Xiuyun, and Xing Yonfu, were introduced to the GINIE project during the summer of 1997. They also visited Apollonet associates in local schools to learn inexpensive methods of cooperative professional development. Local school officials later mailed a box of locally-created materials to the professors upon their return to China.

C. GINIE Printed Material

A GINIE brochure was developed in November 1995 to publicize the project and explain its purpose, mission and structure to potential users and partners. The brochure has been modified several times from its original form, as the project has developed and taken shape. GINIE brochures have been distributed in Bosnia, Geneva (UN agencies), New York (UN Agencies), and Washington DC (US government agencies and NGOs). They have also been circulated in Nairobi, Kenya within various outfits in the UN complex and numerous NGOs such as Radda Barnen, CARE, and the African Regional Center for Computing. In addition, international visitors to the School of Education have also received copies of the brochure. GINIE staff have worked to maintain links with these visitors in the hope of generating more GINIE materials from around the world. The brochure was updated in the Fall of 1996.

Dr. Maureen McClure has also published numerous articles pertaining to the current and future role of GINIE as information repository and facilitator of professional networks. (See Appendix B: GINIE-Related Articles.)

V. PROGRAM SET-UP AND ORGANIZATION

A. Management and Staff

For the duration of the project, GINIE has been housed within the Institute for International Studies in Education (IISE) at the University of Pittsburgh. GINIE, like other projects within IISE, has been responsible for conducting its own affairs; IISE has not directly supervised GINIE project activities. Nonetheless, IISE has supported GINIE in a number of ways. First, the IISE administrator has assisted GINIE with budgeting and personnel matters and often acted as a liaison between GINIE and the bureaucratic mechanisms of the University. Second, IISE has provided office space for GINIE graduate student staff. Third, IISE and GINIE have shared costs for the copier, laser printer, FAX machine, telephones, and office supplies.

GINIE has been led by co-directors Seth Spaulding and Maureen McClure, both full-time faculty in the School of Education, who have been with GINIE since its inception. GINIE has also utilized Graduate Student Researchers (GSRs) to staff the project. GSR is an official designation by the University, and a student works for either 20 hours per week (full-time), 10 hours per week (part-time) or 5 hours per week (quarter time). In exchange, GSRs receive tuition, a stipend, and health insurance commensurate with their work status.

The University setting has allowed GINIE to maximize resource utilization by attracting interested graduate students to work on GINIE projects in conjunction with their own research interests. Indeed, graduate student labor has proven to be very cost efficient for GINIE. These graduate students have brought a high level of skills, competencies and expertise, while being less expensive than non-graduate student professionals. Moreover, as some GINIE work was related to their research interests, GINIE also benefited from numerous voluntary hours on the part of these students.

Project highlights are broken out into four sixth month quarters. A fifth quarter operated between October 1, 1997 and May 30, 1998, primarily on a maintenance level.

Highlights - First Quarter (October 1995 - March 1996)

GINIE initially employed three GSRs on the project. One GSR, Patrick Tse, worked full-time as the Technology Officer, who also assumed the duties of Project Manager. The two other GSRs, Helen Boyle and Sera Kariuki, worked part-time on such tasks as document procurement and abstracting as well as public relations and marketing. IISE also contributed the services of one part-time GSR to work on the latter tasks.

In addition, GINIE attracted several graduate student volunteer workers. Some were interested in the use of the Internet for education about nations in crisis and/or transition. Other volunteers were keen to actively work on a USAID-funded project, which many believed was valuable, "hands-on" experience. (See Appendix C: GINIE Staff and Volunteers.)

In March 1996, the management structure of GINIE changed in order to better utilize the GSR and volunteer input and expertise. GINIE originally operated on a division of labor model, where certain generic duties were assigned to different GSRs and volunteers. The GINIE Technology Officer, for example, was overburdened with responsibility for putting up all documents, managing the server, dealing with any technical problems and, not least of all, designing GINIE, which entailed constructing the GINIE databases and web site. The Technology Officer was also responsible for general project

management, although the new, more decentralized model was intended to relieve many of these duties and disperse them among other staff and volunteers. Under the new management model, all graduate students and volunteer staff, apart from the Technology Officer, selected several "project" areas for which each would be responsible. These were either thematic (e.g., Land Mine Awareness) or national/regional (e.g., Bosnia).

The list of projects developed out of outreach activities GINIE undertook to collect materials. (See Section IV of this report.) Ideally, GSRs and volunteer graduate students would develop other fundable projects according to their research and/or dissertation interests.

Under the model designed in the first quarter, the Technology Officer showed project leaders how to build homepages, put materials on-line (scanning), and edit materials on-line. In this way, GINIE staff could combine research interests with the procurement of material for GINIE and the ability to put this material on-line. In so doing, GINIE staff could maintain their on-line projects.

Highlights - Second Quarter (April - September 1996)

During this quarter, GINIE staff changed to three full-time GSRs. This change in status for some GINIE staff was made to better utilize the graduate student input and expertise. Three GSRs for a total of 60 hours per week represented an increase of one graduate student over the number suggested in the original proposal. This increase was necessary, however, because it was evident at the end of the first quarter that forty hours of graduate student time was not sufficient to handle the demands of GINIE. With twenty extra hours of graduate student time per week, the GINIE project moved forward. Under the project model implemented in the first quarter, GINIE staff assumed greater responsibility for putting up documents and designing the pages associated with their particular project area. The Technology Officer acted as a consultant and trainer for these activities, which enabled him to focus more on technical problems and overall GINIE design issues.

In addition to regular staff, GINIE continued to attract several student volunteer workers, who pursued the development of projects related to research and/or dissertation interests.

Highlights - Third Quarter (October 1996 - March 1997)

GINIE staff consisted of three full-time GSRs, whose tasks were delineated as Technology/Project Management; Landmine Awareness Education/Peace and Reconciliation Education projects; and Refugee Education/Improving Educational Quality projects and General Project Administration. There were also several volunteers during this quarter.

Highlights - Fourth Quarter (April - September 1997)

During April 1997, the final month of the Spring Semester, there were 3 full-time GSRs. The GSRs were the Project Manager/Technical Advisor, Lin Ming-Kuen, and 2 project specialists, Miki Fukuhara and Sera Kariuki, who continued to work on Landmine Awareness and PEER respectively but whose other duties included general document collection and responding to requests from the field.

During the summer months of May-August 1997, GINIE staff was supplemented by an additional 6 part-time graduate students, 4 of whom were GSRs. The others were

compensated by either tuition remission or an hourly wage. GINIE was able to exercise a great deal of flexibility with regard to the number of student hours worked per week . As a result, part-time work during this reporting period was anywhere from 2-10 hours per week. There were also 2 graduate student volunteers during the summer months who were able to pursue individual research interests while contributing their time and talents to GINIE.

During September, GINIE staff was reduced to 1 full-time GSR and 5 part-time GSRs, whose tuition was supplemented by scholarships from the School of Education. This staff remained with GINIE until the end of the Fall semester in December 1997.

From January to May 1998, GINIE was maintained by a skeletal staff of three part-time GSRs. No new programs have been initiated, although document processing and website design have continued. The GINIE I project closed its accounts May 31, 1998.

B. Design

A critical component of the GINIE project has been the creation and maintenance of a website whose contents can be accessed through a database. The design process is intended to keep pace with continuous innovation in technology and in the field. Indeed, as the following highlights illustrate, there has been a constant effort to re-configure GINIE's web design to improve its efficiency and speed, while making it more responsive to GINIE users.

It should be noted that there were numerous equipment purchases throughout the project. Some specifics are described in the quarterly highlights. A complete list of all equipment purchased, however, can be found in Appendix D.

Highlights - First Quarter (October 1995 - March 1996)

Design work was the most pressing task facing the GINIE staff and volunteers at the beginning of the project. The GINIE team, led by the GINIE Technology Officer, designed the GINIE shell and the GINIE homepage. At the time, all websites had to be created by 'hand' using HTML format programming. Many decisions about formats for storage and retrieval were also debated. The primary choice became PDF files.

GINIE staff also developed three project clusters: Bosnia (developed around IISE's UNICEF funded initiative), Land Mine Awareness Education (LMAE), and the Program for Emergency Education for Reconstruction (PEER). LMAE and PEER were designed in cooperation with UNESCO's International Bureau of Education in Geneva.

Highlights - Second Quarter (April - September 1996)

The major design accomplishment during the second quarter was the development of an on-line searchable database. Previously, all documents were on the GINIE website; with the development of a database server, the documents could be moved to the database server for ease of searchability. Butler SQL software was purchased, installed and configured for the database. During the summer of 1996, Tango Server Software was also installed to generate a common gateway interface between the webserver and the database server. The database server and webserver were both on one computer at this time. In September 1996, the webserver was migrated to a second computer to ensure better system efficiency and speed. The system was tested and some documents were moved from the web to the database. Document migration was ongoing, and all new documents were put directly into the on-line database.

The GINIE shell was redesigned in April of 1996, in response to formative evaluation questions and concerns about user needs as well as staff roles and responsibilities,

related to the new project model of organizing GINIE. With this new design, GINIE was then set up on a project model, with material clustered into project groups on the website. Although the materials are organized by project clusters, the user could search the GINIE site in one of three ways:

- * project information or title--i.e. Program for Emergency Education for Reconstruction (PEER)

- * geographical information (country-based sites)

- * general topic/keyword--i.e. land mine awareness education, refugee education

In September 1996, changes were again made in the design and web site integration. This included the re-organization of previous web pages and the integration of new web pages as well as the installation of a new user interface design for easy access and navigation.

Highlights - Third Quarter (October 1996 - March 1997)

The continued refinement of GINIE's an on-line searchable database was the major design task ongoing during this quarter. The GINIE Technology Officer tested the newly developed database and began entering document titles into it. While documents were still on the Web, titles and other relevant information were in the database. This improved the user's ability to search for documents by eliminating the need to switch among multiple pages to conduct searches.

The installation and testing of new software and hardware was a key activity during the third quarter of this project. New software was installed to improve the accuracy of word recognition in scanning documents and the speed of the web server, which became three times faster than it was originally. Other software was installed to increase GINIE's efficiency in developing Web pages and putting materials on-line. The technology officer also conducted staff training on the use of the new software as well as web page construction.

The development of a system to better track GINIE database usage also began during the third quarter. Usage was to be tracked in terms of location of server making contact with the GINIE database and the number of hits (contacts) from other servers, the amount of bytes transmitted by GINIE, the number of files transmitted by GINIE. As more fully described below, this task was accomplished using ServerStat software.

The last design task completed during the period from October 1996 - March 1997 was that of the conference system. This system was set up as a pilot for the Bosnia Education Working Group to post news and ask questions of other professionals in the various areas of development, education, and crisis.

Highlights - Fourth Quarter (April - September 1997)

Steps were taken to improve GINIE's system of tracking, which determines the number of users to the GINIE website during a given time period. This information appeared as a counter on the GINIE home page and indicated how many people visited the site.

There were three shortcomings to this counter. First, it greatly increased download time. Second, it could not check those who bookmarked web pages within GINIE since bookmarks by-passed the GINIE home page. Third, the rapid rise of Internet search engines that indexed all available web pages also allowed users to by-pass the GINIE homepage.

The University of Pittsburgh's servers were the original host of the GINIE website and provided Internet access throughout the project. GINIE remained connected to this server, primarily for storage purposes. Internet access through and activity on the University's servers could not be tracked by GINIE. GINIE's tracking software measured activity only on its own servers.

GINIE installed ServerStat software to generate monthly reports that were analyzed by GINIE staff to determine the number and type of users. First, ServerStat reports indicated the total number of files that had been utilized. This total consisted of a) on-line documents that were requested by the user; and b) all database searches. Second, the ServerStat report indicated the type of organization from which the "hit" originated. It could not penetrate firewalls, however, which have been established by certain organizations for security purposes. This includes many government and international agencies. Third, ServerStat reports provided the countries from which the "hits" originated. Finally, ServerStat was configured so that the GINIE server could keep a running monthly tally of "unique" visitors who entered the GINIE site for the first time. (See Appendix E: ServerStat User Analysis.)

Technical adaptations were also made to the GINIE database in order to improve the availability and usage of materials. First, the database became more "searcher-friendly" by providing a direct linkage for each database search result, or record. For example, a GINIE database search that found 10 records would have 10 corresponding links in either PDF or TEXT formats, or through the GINIE web page. As a result of this adaptation, GINIE users were able to access each record in a single step rather than wading through many layers within the website before reaching the needed information. The construction of a new webpage for the Bosnia Education Working Group (BEWG) was intended to be the product of technical lessons learned from earlier GINIE webpages. Indeed, GINIE staff determined that the BEWG webpage could serve as a useful prototype for all GINIE webpages. This would reflect not only the most efficient webpage design to date but create uniformity among all webpages, making any future adaptations easier. In operational terms, this meant that those websites which had already been established would be redesigned, while new pages would follow the BEWG format. The primary features of the BEWG webpage were country background description(s); a reduced amount of graphics in order to expedite downloading; and a shallower site so that the desired webpage(s) could be accessed more directly. GINIE also undertook the establishment of a mirror site at the National Changhua University of Education in Changhua, Taiwan. It was anticipated that once the mirror site was fully developed it would increase the efficiency of searching the GINIE database and provide easier access for people in East Asia. The GINIE Technology Officer also worked toward the development of a GINIE package that can create a mirror site any time, anywhere. GINIE then becomes portable and can be copied anywhere in the world.

C. Document Collection

Background

The primary rationale of the GINIE project has been to serve as an on-line repository of information pertinent to education in nations in crisis and transition. Document collection has therefore been the focus of much GINIE activity during the life of this project. Collecting documents, however, must be seen within the overall process of collecting,

classifying, editing/reformatting, entering in the GINIE database, and putting on-line all pertinent material. Completing this process for each record in the GINIE database has been a tremendous feat and is testimony to GINIE's success in establishing an on-line repository.

GINIE Website Document Summary

At the end of the fourth quarter, the GINIE database contained approximately 325 records. These records include text documents and such non-standard materials as T-shirts, brochures, and posters. GINIE on-line records can generally be accessed either by locating the document within its appropriate program (e.g., land mine awareness) or using the searchable database.

GINIE on-line records were collected from the following:

I. FOUNDATIONS

Soros Foundation

II. GOVERNMENT MINISTRIES

Liberia (Education)

Somalia (Education, National Planning, Labour and Social Affairs)

Cambodia (Ministry of Labour and Social Welfare)

Lebanon (Education)

III. INTERNATIONAL/DONOR ORGANIZATIONS

International Labour Organization

International Monetary Fund

United Nations Educational, Scientific, and Cultural Organization (UNESCO)

IBE

PEER

United Nations Children's Fund (UNICEF)

Amman

Angola

Bosnia

Croatia

El Salvador

Lebanon

Rwanda

Sarajevo

Somalia

United Nations High Commission for Refugees (UNHCR)

Addis Ababa

Kyrgyz Republic

Sarajevo

United Nations Development Office for Somalia (UNDOS)

United Nations Development Programme (UNDP)

United States Agency for International Development (USAID)

Bureau for Africa

Improving Educational Quality project

Namibia
Office of U.S. Foreign Disaster Assistance
Somalia

World Bank

World Health Organization (WHO)

IV. NON-GOVERNMENTAL AND OTHER ORGANIZATIONS

Afghan Campaign to Ban Landmines
Agence pour la Diffusion du Droit International
CARE
Cooperazione Italian
Handicap International
Institute for Development, Research, and Applied Care
International Rescue Committee
Norwegian People's Aid
Organization for Mine Clearance and Afghan Rehabilitation
Save the Children USA
World Vision International (Cambodia)

V. UNIVERSITIES

Florida State University
Learning Systems Institute
Somali National University (Mogadishu)
University of Pittsburgh
Family-Centered Preschool Project
Institute for International Studies in Education
Western Psychiatric Institute and Clinic
University of Sarajevo
World University Service (Sarajevo)
GINIE on-line records can also be found in the following languages:
English
French
Kinyrwanda
Portuguese
Somali
Spanish
Uduk

(See also Appendix F: List of Documents.)

Highlights - First Quarter (October 1995 - March 1996)

Due to strong connections within IISE to UNICEF, UNESCO and IBE, GINIE concentrated procurement efforts on these three agencies, particularly focusing on the UNESCO/IBE PEER program.

GINIE also sought permission from the Institute for International Research (IIR) to put material on-line from the Improving Educational Quality project (IEQ), a USAID-funded initiative. At that time, IISE was a sub-contractor to IIR and working on IEQ.

GINIE Research Associate Helen Boyle traveled to Bosnia-Herzegovina and Geneva in January 1996 for IISE's UNICEF-funded project in Bosnia-Herzegovina. She collected a variety of documents, including school statistics from Sarajevo, Zenica and Tuzla and

curriculum materials. In Geneva, she collected materials for GINIE from UNHCR, the UN Department of Humanitarian Assistance, and the World Health Organization. **At the end of the first quarter, GINIE had over 80 records on-line**, organized generally into three major areas: Bosnia, PEER and Land Mine Awareness Education. Many of these documents were in hard copy as no electronic record remained. Considerable time and effort were required for scanning, formatting, and editing.

Highlights - Second Quarter (April - September 1996)

GINIE staff concentrated on procuring and putting on-line information clustered around different areas. These areas included country specific information, i.e. education in Bosnia, or topic specific information, i.e. land mine awareness education. For the most part, the content in the different areas was developed from and guided by the materials GINIE procured. It was planned that new project areas would be added as new outreach activities yielded new sources of good information and partnerships.

Many of GINIE's information services activities were not "visible" from the website. For example, during this quarter, related e-mail traffic to GINIE users averaged over 400 messages per month. These messages responded to information requests, asked for information, explained modified systems and made "introductions" to professionals. As a result, these "information brokering" services became a central infrastructure mechanism for coordinating and leveraging GINIE projects.

GINIE's success in brokering information resources in Bosnia was demonstrated by the invitation to be represented in a World Bank project, Participatory Planning for Renewal of Teacher Education in Bosnia Herzegovina from July - December 1996.

During the second quarter, GINIE also received permission from IIR to put material on-line from the IEQ project. This was a result of a June 1996 trip to Washington, DC by two GINIE Research Associates, who introduced the GINIE project to the IEQ project director at IIR and project directors at the Academy for Educational Development and Creative Associates. This trip also resulted in the collection of materials on the Advancing Basic Education and Literacy (ABEL), another USAID-funded project.

Also during this quarter, GINIE began its collaboration with IBE on the Landmine Awareness Education project. This led to the receipt of numerous documents, teaching materials, posters, and other materials to be put on-line.

Materials were also procured from the PEER program, as a GINIE Research Associate traveling to Kenya during the summer months of this quarter visited PEER's headquarters in Nairobi and was given diskettes of documents.

At the end of the second quarter, GINIE had over 150 records on-line. Most were sent from the field and many of them were not available in an electronic format. GINIE staff learned to be quite innovative in "putting up" non-standard documents such as posters, flags, T-shirts and other materials. In addition, many of the documents that field professionals identified as "choice" arrived in hard copy format and needed to be abstracted and scanned. This took considerable time as some materials were faded and worn or they had been copied on poor quality copiers, all of which made readability, and thus scanning, difficult.

Highlights - Third Quarter (October 1996 - March 1997)

GINIE staff continued to concentrate on procuring and putting on-line information clustered around its different program areas. Information services also continued to be

provided to GINIE users. During this quarter, “off-site” e-mail traffic rose from over 400 messages per month to approximately 600 messages per month. GINIE continued to work with staff from IIR to collect material from the IEQ project to put on-line. Indeed, IEQ became one of GINIE’s foci during the third quarter.

At the end of the third quarter, GINIE had over 200 records on-line. As reported earlier, GINIE frequently received hard copies of documents or non-standard materials, either of which required considerable time to put on-line. As a result, GINIE staff decided to increasingly emphasize electronic document collection. GINIE staff decided that a Contributors’ Guide was needed to accompany all future solicitations.

Highlights - Fourth Quarter (April - September 1997)

GINIE staff continued to collect information in a systematic fashion. During this quarter, an e-mail was sent from GINIE to UNICEF field offices worldwide. This e-mail requested any pertinent educational documents that UNICEF officers would like to put on-line. As explained in this solicitation, these documents could be sent via GINIE’s new upload system. Documents could also be sent via e-mail or diskette, either of which would be loaded into the GINIE database. By the end of the fourth quarter, materials had been sent from UNICEF offices in Lebanon, the Caribbean, and Georgia. Other UNICEF offices who expressed a strong interest in participating included Nepal, Iran, and Chile.

An upload system was also created during the fourth quarter. This system was designed to provide a more efficient way for education-related documents to be transferred to GINIE. Specifically, documents could now be sent on-line by transferring DOS or Macintosh file(s) directly to the GINIE website rather than sending diskettes or printed material. Once received, these documents would be entered into the GINIE database for ready access.

GINIE staff also procured pertinent documents from other international education projects housed within the University of Pittsburgh. These included projects in Bosnia, Mongolia, the Kyrgyz Republic, and the People’s Republic of China.

At the end of the fourth quarter, the GINIE database had approximately 325 records on-line. This was a significant increase from the third quarter, when the GINIE database had approximately 200 documents. The growth in the database was attributed to several factors. As GINIE projects were created and became larger, so was the opportunity to procure and put on-line a rich variety of educational documents and materials. Some professionals who represented organizations that collaborated with GINIE (e.g., USAID, UNICEF, UNESCO) send documents to GINIE on an on-going basis, and whenever they encountered documents they believed should be more widely distributed. The existing database is, then, partially the result of on-going relationships that GINIE established with international and other organizations. It is also the result of capturing documents further ‘upstream’ in the production process, when they are in an electronic format.

VI. PROGRAM CONSTRAINTS

A. Labor/Staff Needs

GINIE has proven to be a very labor intensive program. Soliciting, reading, abstracting, scanning and putting documents on-line was a hugely time consuming activity, even with the additional twenty hours of graduate student time GINIE had after May 1996. While GINIE has had volunteers who performed well, their efforts did not prove systematic enough to fill the shortage. As a result, GINIE project management began to consider several options for expanding GINIE staff in cost-efficient but mutually-beneficial ways. A first possible solution was to develop some GINIE projects around relevant dissertation topics. In this way, research done for the dissertation could be used for GINIE purposes as well. Likewise, GINIE worked to attract graduate students who were in the process of developing their dissertation topics, with the idea that some students could develop a dissertation around already existing GINIE project areas. For example, Sera Kariuki is currently completing her dissertation in the area of women's education in refugee camps.

Alas, GINIE staff were too popular. Three of them, Patrick Tse, Lin Ming-Kuen, and Deena Philage were hired by the World Bank before they began their dissertation work. Others, such as Georgia Williams, received job offers at the completion of their master's degrees.

As described in Section V-A of this report, GINIE staff did indeed expand to meet its growing needs. This included both Graduate Student Researchers and volunteers, who used the GINIE project as a springboard for their personal research interests while sharing their data with GINIE as much as possible. One of the shortcomings of this strategy, which GINIE staff came to learn over time, was that for every new project initiative was a support and succession problem. While ideally the person initiating the project would be capable of handling all project needs, in reality other GINIE staff, especially the Technology Officer, was often required to assume some duties. This took time away from existing priorities, and in some cases GINIE staff were spread too thin. Students with specific interests were good matches with agency counterparts. Finding replacements after moved on was sometimes problematic.

B. Design

The primary rationale behind the GINIE project has been to use Internet technology as a means of disseminating information of use to international educators working in nations in crisis and transition. GINIE has been a pioneer project, as this cutting edge technology is still new, although its worldwide usage has increased tremendously. At the same time, because Internet technology is still in its nascent phase, it is constantly being enhanced, upgraded, or otherwise improved. Keeping up with and responding to this rapidly changing technology has proven to be one of GINIE's biggest challenges. GINIE has sought to create a system of webpages that are not only informative but responsive. GINIE staff have always been sensitive to feedback from GINIE users, especially those in the field. Their suggestions for ways of improving the GINIE database and website have, in many cases, helped GINIE become more efficient and provide a much-needed service to professionals in international education. It should also be noted, however, that while GINIE has created mechanisms for improving communication, it cannot control the extent to which they are utilized.

For example, on-line conferencing mechanisms were established to provide a forum where professionals and other interested parties could share timely information or advice. New relationships and networks of people and organizations could also be established or strengthened. Unfortunately, this system has not proven to be as useful as originally intended, but this cannot be treated as a shortcoming of GINIE. The BEWG conferences didn't work because most donors were in Washington and a local phone call was often more convenient.

As GINIE was a project idea with little precedence, much of the work has been trial and error, particularly with regard to design. GINIE staff learned a great deal about the types of formats that are most useful to international agencies, field personnel and the like. Potential GINIE users often have conflicting demands, so the overall design of GINIE should accommodate the broadest possible spectrum of users. In addition, as Internet technology is still relatively new, many users are unskilled at using it. This has led to problems for GINIE users in downloading materials or, in some cases, in looking at the site on-line. Development of the GINIE on-line database, however, ameliorated this problem to some degree. The bad news is that innovation has been so rapid that much of GINIE's work could now be rapidly reproduced. The good news is that the extraordinary rapidity of technological innovation has generated new forms for professional collaboration through archival systems, distance learning using Internet-based courseware, and multiple-site collaboration using Internet-based groupware.

C. Document Collection

Although document collection proceeded at a steady pace during the life of the project, several difficulties were encountered. First, it is always much easier to request specific documents by name. However, GINIE staff often had to make "generic" requests of busy people--project managers, desk officers and others. The requests had to be generic because GINIE staff often did not know what specific documents had been produced under a given project. Hence, GINIE staff relied on field people, not only to collect materials and send them, but in many cases to decide what materials to send in the first place.

The extra step of asking these people to decide what is needed was both a help and a hindrance. Asking experts to make contribution decisions was an excellent way of ensuring the receipt of high quality materials. On the other hand, broad or generic requests for materials were sometimes perceived as vague. This also added an extra step to the document collection process; people would have to stop and think about what to send, go through their materials and evaluate what would be useful. These kinds of requests could more easily be put aside by busy professionals. The costs of acquiring information were higher than anticipated, in part due to cutbacks in so many agencies. Professionals so often simply did not have the time to choose and send documents. Also, professional generosity was limited by a growing concern that information should be held locally and shared through links, not documents per se. A second problem encountered in document collection was uncertainty on the part of contributors as to how the materials would be displayed and how they should be contributed. People are often wary that materials will be put up without proper explanation and context, and they often do not have time to produce accompanying documents to explain the materials.

A third problem with document collection was the variety of formats in which GINIE staff received information. Hard copies of materials needed to be scanned, which was extremely labor intensive. Electronic copies often came in with no indication of what program the document was prepared in or what e-mail program was used to send it. This resulted in delays getting documents on-line. GINIE staff eventually decided that for the most part, must limit collection activity to those things that could be received in electronic format, to reduce the high costs of scanning poorly printed or overcopied materials.

To address the above problems, GINIE staff determined that a Contributors' Guide should accompany all solicitations. This guide was intended to provide clear, detailed instructions about the kinds of materials GINIE was soliciting, the format(s) in which they should be sent, and the manner in which they would be displayed on GINIE webpages. (See Appendix G: Draft Contributors Guide for GINIE.)

It had been anticipated that this Contributors' Guide would be an attachment to a blanket solicitation to be sent out during the final quarter of the project. As funding beyond the end of the project (September 1997) remained uncertain, GINIE staff decided it would be disadvantageous to move forward with the solicitation of new materials. Instead, a solicitation could be undertaken once new funding was secured. This would ensure that there would be adequate staff to edit incoming documents as needed, enter them into the database, and add them to GINIE web pages(s). Postponing a blanket solicitation would also protect the integrity of GINIE as a project that uses all contributions in the manner specified in the solicitation materials.

D. Copyright Issues

A related constraint has been the implications for publishing on-line documents, curricula, and other materials that have been copyrighted. Specifically, does GINIE have permission to put on-line documents that have been copyrighted? This issue arose as GINIE staff began considering what to include in the Contributors' Guide which, as stated above, would be included in a blanket solicitation for materials.

Copyright infringement for net/web-based multimedia publishing was carefully researched by GINIE staff, who concluded that there are few, if any, laws governing Internet and copyrights. Nor was it clear which documents GINIE procured from international and U.S. government agencies are copyrighted, and whether specific permission is needed from them before putting these documents on-line.

Due to these legal ambiguities, GINIE staff determined that the safest course would be to proceed with the Contributors' Guide but include a carefully worded disclaimer. This disclaimer would appear on all GINIE documents put on-line, which would specifically state that these materials are intended for non-commercial purposes only. Advice was sought from the General Counsel's Office at the University of Pittsburgh for the precise wording of a disclaimer.

GINIE staff took the view that even the most minimal risk of a lawsuit would be unacceptable. As a result, GINIE would, in every case, have to explicitly ask for permission from the relevant copyright holder(s) to publish their document(s) on the GINIE web site. An already arduous task would be made even more difficult since the author(s) and/or copyright holders are not always clear. Many documents are

published as agency documents with no author(s) listed. In this instance, GINIE would need permission from the agency.

One possible solution to the need for explicit agency permission would be to get “blanket” permission from the top official. This could perhaps be in the form of a directive to all agency staff that they had permission to forward any and all relevant materials to GINIE. Another possibility would be to send out a release form with each solicitation, which would be filled in and returned by the owner(s) of the copyright. In any case, copyright issues became moot once the decision was made to postpone sending a blanket solicitation and Contributors’ Guide.

VII. LOOKING TOWARD THE FUTURE: GINIE 2

(Dr. Maureen McClure, GINIE Director)

The GINIE project is extremely grateful to USAID for the opportunity to innovate in the more flexible environment of grant funding for GINIE 1. We worked simultaneously in three relatively unknown and rapidly changing areas: a) education in nations in crisis and transition; b) the use of Internet technology to inform education professionals working internationally in these areas; and c) the use of collaborative design processes working with field professionals. This dynamic, highly contextual approach to innovation is increasingly needed in many areas of international development.

What were the key lessons learned?

We learned there is a great and growing interest in education in nations and sub-national regions in crisis and transition. This interest covers three overlapping areas: a) education in emergencies such as wars or natural disasters; b) education in post-emergency transitions under conditions of chronic economic stress; and c) education in pre-emergency conditions such as chronically weak economies with significant ethnic rivalries. In the past these three areas were often seen as areas separated by time or geography. Today low-level conflict, reconstruction and development may co-exist simultaneously.

The most important lesson learned by GINIE 1 about education in nations in crisis and transition was the criticality of professional networks. Professional networks, always important in developing countries, take on additional power in emergencies in transitions. They can help provide communities with critical, educated leadership. They can act as 'virtual' institutions when traditional ones collapse. They can serve as moderating voices in the face of extreme ethnic nationalism. They can create 'apprenticeship' opportunities to quickly train new people. They can serve as professional renewal networks through low cost peer coaching. They can also generate income through 'education economies' that contribute to community development. The value of these contributions to democracy building and market economies cannot be understated.

Future Activity 1

The whole arena of education in nations in crisis and transition is changing so rapidly that it is important to map it. GINIE 2 will develop a concept paper that organizes current thinking and highlights needed areas for policy attention. This paper will be distributed among key professionals and institutions and discussed at a seminar that is both in person and on-line. Serious thought should be given to the development of regional level professional networks subsidized or sponsored by relatively small but reliable and long-term revenue sources. There needs to be extensive research in the new area, 'simultaneous' development, for education in communities and regions with uneven development and unstable economies.

We learned that the international education donor community was unprepared for the complexities of the transitional conditions facing BiH after the war.

The future becomes twisted in complex ways in today's nations in crisis and transition. Low level conflict may continue a short distance from rapid reconstruction and development. The introduction of Internet technology is compounding this complexity.

When GINIE 1 began working with UNICEF in BiH, the Internet was not available, electricity was sporadic and telephone services were very weak. The GINIE office corresponded by e-mail with UNICEF in Zagreb about landmine awareness education. In January 1996 a GINIE associate, Miki Fukuhara, conducted a web search for materials and the hardcopy was hand-carried by IBE/UNESCO to Sarajevo. Within six months she had designed a top website in a partnership with IBE and the Interagency Consultation on Humanitarian Assistance and Refugees. The landmine awareness education effort continues while, simultaneously, GINIE is working with the Soros Foundations/BiH and Pitt's School of Information Sciences to plan new avenues for Internet distance learning using state-of-the-art courseware and groupware. Due to a joint UNICEF/GINIE initiative, high school students in Bosnia are corresponding with high school students in the US.

Future Activity 2

Unfortunately, planning in BiH proceeded as though it was a reconstruction project and not the front lines of a low-level conflict. No follow up has been taken on repeated calls for increased investment in telecommunications for educational security. The BiH MoEs were, as expected, fixated on restoration and reconstruction, and actively avoided discussions about the need to prepare for chronic economic and political instability in the region for at least the next ten years. Donor organizations were little help. Their expertise was divided between intervention and reconstruction and development. Their response repertoire for chronic transitional instability was limited.

Educational planning for long transitions marked by chronic economic instability was attempted in UNICEF, the World Bank and UNESCO projects, but was met with resistance, some of it fierce. As of this writing, the UNESCO project may have achieved some limited success in establishing a cross-cantonal telecommunications professional network for MoEs.

Early plans included educational information systems with complex functions. One function would link cantonal and federal MoEs so that they could communicate with each other about issues of decentralization and Internet-based professional development. The professional development network was to be developed first within the federation, then cautiously extended to the region.

Another system would have operated a federation-wide emergency management telecommunications system that would be operable for natural disasters at the cantonal level, but would be linked with all other cantons and could be used as an early warning system in emergencies. The cantonal education ministries would work with other ministries in the coordination of emergency management systems. The systems could, if secure, share a common infrastructure with specialized separate features.

GINIE 2 will continue to explore the specialized telecommunications needs of education in nations in crisis and transition with the Interagency Consultation on Humanitarian Assistance and Refugees.

We learned that the costs of information are very high in the face of unstable funding sources. It rapidly became clear that we were working in worlds where goal attainment usually was not an option. The very high level of commitment by professionals in the field and general offices in unacceptably unstable budget situations was no less than heroic.

In BiH, political and economic stability was weak. Institutional stability was nonexistent. Donor funding schemes were cutback and restructured fortnightly. Personnel turnover was high. Competition for resources occasionally reached 'cannibalistic' levels on all sides. The low costs of information and transactions essential for institutional stability sometimes collapsed not only in the MoEs, but in the donor organizations as well. General offices often inadequately considered the 'digestive' capacities of local institutions (both donor and recipient).

Our assumptions of collegial information sharing were shattered because the costs of acquiring reliable information were often too high to overcome.

Economic fear within institutions greatly raises its information costs. The relationship may be exponential. Professionals concerned about the possibility of the next paycheck had little extra time to support humanitarian data collection efforts. They were job hunting. Donor organizations worried about their patrons'/investors' commitments feared sharing materials because they were concerned how the information would be used. Our efforts spawned as much competition as cooperation. Tacit questions included the motivation of USAID's interest in acquisition. As expected, GINIE's efforts spurred internal data collection and telecommunications in other donor organizations. This is not bad because it helps bring internal investment to education in nations in crisis and transition.

Despite all of the obstacles, there has been explosive growth in Internet use in BiH. Education professionals, who used e-mail for the first time not long ago, are now designing sophisticated courseware materials for Internet use.

In July 1998, the Soros Foundations/BiH and The Management Information Technologies Center in Sarajevo sponsored a Pittsburgh/GINIE visit by three University of Sarajevo engineers responsible for Internet and education technologies in BiH. They want to extend the notion of a professional network to link GINIE's repository and communications capacities to high-end courseware and groupware, in an attempt to create 'leapfrog' technologies for Internet-based professional development.

Future Activity 3

Education professionals in nations in crisis and transition quickly want to bridge the need for specialized international expertise (land mine awareness education) with access to professional development materials about improving educational quality. There is a need for a rapid access, 'one-stop shopping' on-line professional educational development center for education professionals working internationally which includes: a) policy dialogue about education quality and learning; b) professional development based on research in such areas as early childhood development and health, teaching and learning, information technology and organizational renewal, revenue generation and civility; and c) Internet-based classroom exchange.

GINIE 2 will work with IEQ II to develop a website that helps bridge the information gap between education in nations in crisis and transition and education in developing countries.

As an experiment in the future possibilities of telecourses, two GINIE Internet-based pilot courses are being developed. A course on socio-cultural factors behind migration and refugee movements using GINIE materials as text is being developed by Pilar Aguilar at Webster University in Geneva. This course is being developed through Nicenet, which is freeware that can be freely accessed on the Internet.

A second course on human resources management is being co-developed and will be co-taught this Fall by Zlatan Sabic of the Soros MIT Center/Sarajevo and Maureen McClure of GINIE. This course is being developed to pilot CourseInfo, limited access software. The human resources course will cover topics related to professional and institutional governance, organizational renewal for teaching, learning and stress management, and informational technologies to support professional work. More research and development is needed in the area of 'leapfrog' technologies.