DOCUMENT RESUME

ED 412 212 SP 037 594

AUTHOR	Yap, Kim O.
TITLE	Creating Connections: The Internet and Teacher Isolation.
PUB DATE	1997-03-00
NOTE	15p.; Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, IL, March 24-28, 1997).
PUB TYPE	Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Computer Literacy; *Computer Uses in Education; Elementary School Teachers; Elementary Secondary Education; *Internet; *Mathematics Instruction; Mathematics Teachers; Program Evaluation; *Rural Schools; *Science Instruction; Science Teachers; Secondary School Teachers; Teacher Attitudes; Teaching Methods
IDENTIFIERS	Annenberg CPB Project; Colorado; Minnesota; Montana; *Rural Telecomputing Initiative; *Teacher Isolation; Tennessee

ABSTRACT

Four 3-year projects within the Rural Telecomputing Initiative enabled rural teachers in Montana, Colorado, Minnesota, and Tennessee to connect with math and science reform communities and use resources available through the Internet. This study of the projects' first 2 years examined: (1) whether the projects made a difference in teachers' isolation and attempts to improve math and science education; and (2) whether resources the projects developed were valuable to rural teachers in reforming math and science education. The study included two written surveys, 9 months apart, of teachers and principals. Evaluation teams visited two participating schools within each local project annually, observing science and mathematics classes; interviewing principals, teachers, and students; and moderating focus groups. Results found that teachers became substantially more comfortable with the Internet. Telecomputing reduced teachers' sense of isolation and increased their collaboration with colleagues and experts. Resources acquired via the Internet at least had a moderate impact on their teaching; most teachers changed teaching techniques as a result of acquiring Internet resources. Teachers became more comfortable with being learning facilitators rather than information dispensers. (SM)

Creating Connections: The Internet and Teacher Isolation

Kim O. Yap
Northwest Regional Educational Laboratory

A paper presented at the annual meeting of the American Educational Research Association, Chicago, March 24-28, 1997

Creating Connections: The Internet and Teacher Isolation

Kim O. Yap
Northwest Regional Educational Laboratory

Introduction

As part of its Math and Science Project, Annenberg/CPB began in 1993 an initiative to create online services that support the professional development and activities of rural teachers who use telecomputing to improve math and science teaching. The Rural Telecomputing Initiative operates on the premise that nearly all teachers perceive themselves to be isolated from their peers and that the isolation makes it difficult to learn about developments in math and science reform (Annenberg/CPB Project, and PBS Adult Learning Service, 1992; Corporation for Public Broadcasting, 1993; National Center for Education Statistics, 1995). The Initiative seeks to enable rural teachers to be connected to the math and science reform communities and to use the ideas and resources available through telecomputing to become more effective in the classroom.

Among other things, the Initiative seeks to provide rural teachers with access to:

- Ongoing help in the telecomputing environment
- Specialized services that help teachers share curricular information
- Resources for classroom use
- Information on developments in math and science
- Opportunity to identify and converse with other math and science professionals

Four projects have been funded under the Initiative:

1. Western Montana College (Montana)
2. Boulder Valley School District (Colorado)
3. Technology and Information Educational Services (Minnesota)
4. The University of Tennessee at Chattanooga (Tennessee)

All four projects share a common starting point: training teachers to use the Internet for communications and access to information resources. In addition, in varying degrees, all projects will develop new resources that can be made available to other teachers through the Internet. The projects represent a mix of approaches to solving the problem of isolation through computer networking. Each project is further described below.

The Projects

Montana. The focus of this project is to train rural teachers to use telecommunications to access knowledge, build a community of peers, and share curricular activities. It demonstrates a strategy for using telecommunications that is economical, practical, and replicable.

The project seeks to:

- Provide teachers with access to telecommunication equipment, sustainable connectivity, and technical training and support
- Link teachers to math and science resources and databases on the Internet
- Network teachers with local, national, and global communities of peers and experts
- Assist teachers in creating and implementing telecurricular units
- Demonstrate teacher innovations in the use of the Internet and other forms of telecommunication

Major project activities include summer training workshops and the implementation of telecurricular units. During the first year (1994-95), 22 teachers in grades 3 through 12 received training in the use of the Internet and in the creation and use of telecurricular units. In the second year, these teachers served as mentors for an additional 80 teachers (from Montana, Washington, Utah, Oregon, and Idaho) who received training online. It is expected that an unlimited number of teachers, using disseminated project materials and assistance of online mentors, will be able to emulate the project model.

Colorado. The project seeks to connect rural teachers through telecommunications and to provide them with an Internet-accessible database of math and science reform initiatives and relevant data. To meet the first goal, the project has provided Internet training to more than 500 rural teachers at 21 regional training centers nationwide. The training sessions are conducted by rural teachers for rural teachers. Training facilities are provided by universities and math and science organizations. On- and off-line support is provided by two rural teachers who have two years of experience with the Internet. The Internet supports rural teachers in several ways. First, it provides rural teachers with a means of communicating with one another. Second, it gives them access to a database of math and science reform information. Third, it provides them with access to all the math and science resources that are on the Internet. Finally, it serves as a platform for curricular innovations to facilitate reform.

To achieve the second goal, a rural teacher experienced with math and science education has gathered information on regional, state, and local reform initiatives to create a science and math initiatives (SAMI) database on the Internet. The database contains narratives and vignettes of math and science reform activities, bibliographies of relevant research, updates on statewide initiatives, and curriculum materials.

Project staff have continued to provide technical assistance and troubleshooting help to participants who attended training activities at the 21 regional training centers across the country.

The assistance is provided over the phone and through e-mail. Onsite assistance is provided when clients can pay for expenses entailed.

In addition, four rural schools in Colorado are exploring ways to integrate Internet resources into math and science curricula. Their experience with curriculum integration will also be shared through the database.

Minnesota. The project is designed to develop online services to support rural classrooms (teachers and students) in applying problem-solving techniques for community-based projects to improve their math and science skills.

Through staff development activities and the use of online networks, ten teams of rural teachers and community members have participated in the project to improve the teaching and learning of math and science. Project teams receive training and support as they guide their students in identifying a community issue and designing a solution.

Students work as mathematicians and scientists using appropriate techniques and skills to address the issues. The project teams communicate with one another, share information, contact math and science education experts, interact with researchers, and search for information through a variety of online resources through the Internet.

The project is based on the rationale that the reform of math and science education should ensure that students will achieve at levels that make them competitive with students of other countries. The use of technology can facilitate that reform. A number of new teaching strategies have been identified that can help students construct their own knowledge and take ownership for their own learning process. The roles of students and teachers are changing. Students will work as scientists using appropriate methods and tools to address community problems. Teachers will help students identify sources of information, tools to process information, and methods of presenting information to others. Each project team includes a science teacher, a math teacher, and a community member. Some project teams have members from different schools.

Project sites are located in communities with a population of less than 5,000 and are isolated from ready access to instructional support services. The ten sites include six in Minnesota, one each in Iowa, North Dakota, Michigan and Wisconsin.

Tennessee. The goal of the project is to change the way teachers teach and students learn science in grades four, five, and six within the seven Tennessee Valley counties and, by example, effect similar changes in other communities. The project seeks to empower teachers by creating collaborative research opportunities among teachers, practicing scientists, and college professors. Project teachers translate theories and strategies of reform in science education into classroom practice by using a range of resources, including:

- Science, Technology, Society (STS) techniques and strategies
- New assessment techniques

- State-mandated curriculum guidelines
- National science education standards
- Internet communication facilities and instructional resources
- Partnerships with practicing scientists

The project provides staff development activities through summer and winter training conferences. In addition, it offers Marsville (a science fair) which provides hands-on learning experiences to students, teachers, and parents from participating schools.

The Study

The Rural Telecomputing Initiative (consisting of the four projects) has an overall timeframe of three years. The four projects are funded from 22 to 30 months. Initially, about 1,000 teachers will be involved with these projects. It is estimated that as many as 5,700 teachers will be involved during the three-year period.

This paper describes preliminary findings of an ongoing evaluation study of the four projects. The study addresses two central questions:

1. Do the training and other interventions, as implemented by the local projects, make a difference in teachers' isolation and their attempts to improve math and science education in the classroom?

2. Are the Internet-accessible resources developed by the projects of value to rural teachers in reforming math and science education?

Evaluation activities were initiated in August 1994 and will continue until May 1997. This paper presents evaluation results obtained from onsite visits and teacher surveys conducted through June 1996.

Methods and Data Source

The study uses an array of data collection methods, including written surveys, interviews, focus groups, and onsite observations. Specifically, written surveys were conducted with samples of participating teachers and principals of participating schools. In addition, the evaluation teams conducted site visits to two participating schools for each local project annually. During the site visit, the evaluation teams observed a science and a mathematics class at each school; interviewed the principal, participating teachers, and students; and moderated a focus group meeting of key stakeholders.

Samples of project teachers (167 in February 1995 and 170 in November 1995) participated in the written surveys electronically or by completing a paper version of the survey. The response

rates ranged from 40 to 90 percent. The average response rate for the four projects was 72 percent.

A breakdown of survey participants by project is as follows:

February 1995 survey:	Montana	18
	Colorado	75
	Minnesota	23
	Tennessee	51
November 1995 survey:	Montana	52
	Colorado	58
	Minnesota	18
	Tennessee	42

In addition to the survey, a focus group meeting was conducted for each local project during the months of February through April of 1995 and 1996. Each focus group consisted of 6-8 stakeholders, including participating teachers, school administrators, students, parents, and community members.

Data Analysis

The written surveys and site visits provided a wealth of data pertaining to program processes and outcomes. Data analysis provided such descriptive statistics as frequency counts, percentages, means, and standard deviations for the survey data. Field notes taken during onsite observations, interviews, and focus group discussions were content analyzed to detect patterns and trends in program processes and outcomes. A separate analysis was first conducted for each local project. A cross-project analysis was then conducted to develop overall evaluation findings.

In addition, survey data for a matched group of teachers who participated in both survey administrations were analyzed to detect differences between the two survey administrations. The analysis was focused on the issues of teacher isolation, use of the Internet, and impact on teaching of resources acquired through the Internet.

Results

Demographics

A majority (90%) of the participating teachers were Caucasian with an average age of 43. There were more female (66%) than male (34%) participants. Nearly all (97%) of the teachers had a bachelor's or higher degrees. The average participant had been a teacher for more than 16 years. As a group, the participants taught a full range of grade levels, from kindergarten to grade 12. A

significant proportion (26-31%) of the participants were math or science teachers, teaching an average of 71 science students and 66 math students during each school year.

Teacher Isolation

Unmatched Sample

As a group, the teachers felt moderately isolated, rating their sense of isolation as a 3 on a 5-point scale, as shown in Tables 1 and 2. In Februray 1995, 35 percent of the participating teachers indicated a relatively low degree of isolation (i.e., ratings of 1 and 2). In November 1995, 39 percent of the participants provided similar ratings. It should be noted that while the two groups (February and November) were not intact cohorts, many teachers in the February survey sample were also in the November survey sample. In addition, for both the February and November survey administrations, the survey was conducted after the participants had had substantial exposure to the project activities.

Table 1

Teacher Ratings on Isolation, February 1995

Degree of Isolation		Montana	Colorado	Minnesota	Tennessee	Total
Low	1	14%	13%	11%	18%	15%
	2	14%	24%	16%	18%	20%
	3	36%	29%	5%	28%	26%
	4	29%	18%	57%	22%	25%
High	5	7%	16%	11%	14%	14%
N		18	75	23	51	167
Mean		3.0	3.0	3.4	3.0	3.0
S.D.		1.2	1.3	1.2	1.3	1.3

Table 2

Teacher Ratings on Isolation, November 1995

Degree of Isolation		Montana	Colorado	Minnesota	Tennessee	Total
Low	1	14%	8%	17%	25%	15%
	2	17%	24%	28%	30%	24%
	3	30%	28%	33%	23%	28%
	4	25%	22%	5%	12%	19%
High	5	14%	18%	17%	10%	14%
N		52	50	18	40	165
Mean		3.1	3.2	2.8	2.5	2.9
S.D.		1.3	1.2	1.3	1.3	1.3

It is noteworthy that the most positive ratings in the November survey administration were found in the Minnesota and Tennessee projects where participating teachers worked with their students on school or community projects. The other two projects, in comparison, were more focused on providing general training and technical assistance to the participants. These projects benefited a larger number of teachers, but perhaps in a less intensive way.

A significant proportion (20-68%) of the participating teachers indicated that they have decreased their sense of isolation or have increased collaboration with colleagues. More importantly, a greater percentage of the participants reported such positive changes in November 1995 as compared with February 1995, as shown in Table 3.

Table 3

Percent of Teachers Reporting Decrease in Isolation and Increase in Collaboration

Item	Feb. 1995	Nov. 1995
Decreased isolation from colleagues in other locations	36%	53%
Decreased isolation from colleagues at school	20%	35%
Increased collaboration with colleagues in other locations	60%	68%
Increased collaboration with colleagues at school	50%	62%

Matched Sample

A total of 78 teachers participated in both survey administrations. Survey data for this matched group of respondents were analyzed separately to assess teacher isolation. The results, summarized in Table 4, indicate that the teachers felt moderately isolated from colleagues, with average ratings of 2.8 and 2.7 for February 1995 and November 1995, respectively. It is interesting to note that this matched group of teachers appeared to feel less isolated than the overall unmatched group.

Table 4

Ratings on Isolation from a Matched Teacher Sample

Project	Isolation*	
	Feb. 95	Nov. 95
Montana (N=13)	3.2	2.8
Colorado (N=28)	2.6	3.1
Minnesota (N=8)	3.4	2.5
Tennessee (N=29)	2.8	2.3
Total (N=78)	2.8	2.7

*High ratings indicate high degrees of isolation. Ratings are based on a 5-point scale. Means for total are weighted means.

Focus Groups

In focus groups, the teachers said that the projects have provided additional contacts with the outside educational community. Interestingly enough, they indicated that they feel isolated within their own building. As one teacher put it:

> *I don't feel isolated as some people do because I'm involved in a lot of things like this. I do feel isolated within my own building, teachers that teach at the opposite end of the building. There just isn't enough time to talk to people.*

One teacher mentioned that she no longer feels alone. Prior to the project, she was unaware that other teachers had the same kinds of problems with curriculum and students. Now, she can discuss these issues with other teachers via e-mail.

Another said that teachers participating in the Annenberg project have become isolated from non-participating teachers who are critical of the student-directed learning strategies. Some teachers feel threatened. They are concerned that "they'll get fired if they don't adopt the student-directed learning strategies."

There was a general consensus among the focus group participants that the key to success is increased training to bring additional teachers into the project.

Internet Use

Unmatched Sample

The level of comfort in using the Internet among participating teachers was moderately high for both February 1995 and November 1995, as summarized in Table 5. The average ratings were 3.0 and 3.6, respectively, on a 5-point scale. In November 1995, a majority (60%) of the teachers rated their level of comfort as a 4 or 5.

Table 5

Percent of Teachers Reporting Various Levels of Comfort in Using the Internet

Level of Comfort		Feb. 1995	Nov. 1996
Not comfortable	1	11%	5%
	2	24%	12%
	3	26%	23%
	4	32%	35%
Very comfortable	5	7%	25%
Mean		3.0	3.6
S.D.		1.1	1.1

Searches for classroom resources were the most frequently reported purpose of using the Internet (44%). Other purposes included sharing ideas and information with other teachers (39%), seeking advice from experts (19%), and using the library (30%).

Matched Sample

A total of 78 teachers participated in both survey administrations. Survey data for this matched group of respondents were analyzed separately to assess the teachers' level of comfort with telecommunications on the Internet. The results, summarized in Table 6, indicate that the teachers appeared to have substantially increased their level of comfort with the use of the Internet, with the average ratings rising from 3.0 in February to 3.9 in November.

Table 6

Ratings on Level of Comfort in Using the Internet from a Matched Teacher Sample

Project	Internet*	
	Feb. 95	Nov. 95
Montana (N=13)	3.3	4.2
Colorado (N=28)	3.5	4.2
Minnesota (N=8)	3.0	3.9
Tennessee (N=29)	2.4	3.4
Total (N=78)	3.0	3.9

*High ratings indicate high levels of comfort. Ratings are based on a 5-point scale. Means for total are weighted means.

Impact

Unmatched Sample

For both February 1995 and November 1995, a majority of the participating teachers reported that the resources which they acquired through the Internet has had at least a moderate impact (a rating of 3.4 on a 5-point scale) on their teaching, as shown in Table 7.

Table 7

Teacher Ratings on Impact of Internet Resources on Teaching

Impact		Feb. 1995	Nov. 1996
Low impact	1	11%	9%
	2	14%	14%
	3	24%	27%
	4	31%	24%
High impact	5	20%	26%
Mean		3.4	3.4
S.D.		1.2	1.1

A large majority (90%) of the teachers reported that they have made changes in their teaching as a result of acquiring the Internet resources.

Matched Sample

A total of 78 teachers participated in both survey administrations. Survey data for this matched group of respondents were analyzed separately to address the question of impact that Internet resources have had on teaching. The results, summarized in Table 8, indicate that the impact of Internet resources on teaching, as perceived by the teachers, has increased (from a rating of 3.6 to a rating of 3.9) from February to November 1995.

Table 8

Ratings on Impact of Internet Resources on Teaching from a Matched Teacher Sample

Project	Impact*	
	Feb. 95	Nov. 95
Montana (N=13)	3.5	4.0
Colorado (N=28)	3.5	3.4
Minnesota (N=8)	4.2	4.3
Tennessee (N=29)	3.7	4.2
Total (N=78)	3.6	3.9

*High ratings indicate high levels of impact. Ratings are based on a 5-point scale. Means for total are weighted means.

Focus Groups

In focus groups, the teachers indicated that a major impact is that they are now feeling comfortable about using the equipment and use it more often. In addition, there is increased awareness that resources are out there and can be accessed through technology.

The projects have encouraged and facilitated the use of interdisciplinary instruction in the classroom. It has increased student access to learning resources. According to the teachers,

> *Our kids have really become aware that they can get resources electronically from other libraries.*
>
> *For kids who don't have access to the Internet at home, they now have access at school. This certainly widens their horizons.*
>
> *The kids now have resources on the Internet that they would not have otherwise. It provides a way of getting high level information that they would not have any other way.*

A teacher said that the greatest impact of this program in his class has been the change in the way the subject matter is taught. His students are involved in their own learning; they are no longer sitting in neat little rows. Another teacher said that her students seem to like the student-directed learning process more than the traditional strategies and seem to be more interested in learning. A third teacher said that her students love to come to her science classes now. The student-directed method gives students more ways to show what they have learned (e.g., projects and oral presentations). If students have difficulty with paper-and-pencil tests, they have other opportunities to improve their grades through other types of assessments.

According to a district superintendent, the biggest difference is the way in which teachers and students from different grades work together. Before the Annenberg project, teachers primarily worked alone or sometimes with instructors of the same grade level. Now, teachers and students from third through sixth grades enjoy working together on projects.

One teacher added that her students now have an effective way of obtaining answers to questions:

> *Before, students would have to go to the library, pick up a book, and write down the answer. Now, students can flip on a computer to find the answer.*

Another teacher said that she had taught for 22 years in a traditional, "organized" classroom setting. The project has taught her that there are other ways to teach. Now, she is trying to empower her students to be in charge of their own learning. She has found that when students are empowered, they push beyond the requirements of the assignment to do additional research. This has spilled over to other subjects besides math and science.

There was consensus that the projects have improved the quality and equity of math and science education. Students of participating teachers received supplemental, hands-on learning activities. The activities have real-life relevance (e.g., environmental health) and promote research and problem-solving skills. In many cases, the activities are part of a regular science or math course. Students in the focus groups indicated that the projects have provided a fun dimension in science

teaching and learning. Teachers and students alike are using the Internet (e-mail, gophers, and Netscape) to obtain research information for projects or to answer specific research questions.

In addition, the projects have created resources to be shared on the Internet. A notable example is the science and math initiative (SAMI) database developed by Colorado project. Many teachers have also created classroom resources for sharing on the Internet.

Through various means (e.g., Marsville of the Tennessee project and the study of community issues in the Minnesota project), the projects have created a need for using telecommunications to gather and share information as well as to foster the use of hands-on and inquiry-based teaching and learning. This has produced a great deal of excitement and enthusiasm for learning on the part of participants, including students, teachers, and parents. The projects have provided an effective vehicle for teaching more advanced skills (e.g., analysis and problem solving) in integrated instruction. The hands-on approach to learning has benefited a full range of students, including low-achieving and special education students.

Concluding Remarks

The preliminary findings show that telecomputing among rural teachers can reduce their sense of isolation and increase collaboration with colleagues and experts. In addition, resources which they acquired from the Internet have at least a moderate impact on their teaching. Data obtained from onsite observations, interviews, and focus group meetings suggest that these teachers are providing more hands-on learning experiences in math and science to their students, and are more likely to use the inquiry approach in teaching these subjects. In addition, they are more comfortable with playing the role of learning facilitator as opposed to information dispenser, a role they typically played in the past.

The four projects demonstrate that telecomputing can be an effective way of changing and improving math and science instruction, particularly in rural areas. With their various emphases, the projects have created a model for "scaling up" the impact of technology as a learning tool. The resource database developed by the Colorado project, the cadre of mentoring teachers nurtured by the Montana project, the community involvement focus promoted by the Minnesota project, and the hands-on science activities provided by the Tennessee project have fostered the use of the Internet as a tool for gathering, sharing, and using information to answer research questions in real life situations, creating enthusiasm for learning and a sense of accomplishment.

References

Annenberg/CPB Project, and PBS Adult Learning Service. (1992). *Going the distance. handbook for developing distance degree programs:* Washington, DC: Author.

Corporation for Public Broadcasting. (1993). Lifelines of Learning. Distance Education and America's Rural Schools. Washington, DC: Author.

National Center for Education Statistics. (1995). Advanced Telecommunications in U.S. Public Schools, K-12. Washington, DC: U.S. Department of Education

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
Educational Resources Information Center (ERIC)

ERIC®

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: Creating Connections: The Internet and Teacher Isolation	
Author(s): Kim O. Yap	
Corporate Source: Northwest Regional Educational Laboratory	Publication Date: March 1997

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic/optical media, and sold through the ERIC Document Reproduction Service (EDRS) or other ERIC vendors. Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following two options and sign at the bottom of the page.

☑ Check here
For Level 1 Release:
Permitting reproduction in microfiche (4" x 6" film) or other ERIC archival media (e.g., electronic or optical) *and* paper copy.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Level 1

The sample sticker shown below will be affixed to all Level 2 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Level 2

☐ Check here
For Level 2 Release:
Permitting reproduction in microfiche (4" x 6" film) or other ERIC archival media (e.g., electronic or optical), but *not* in paper copy.

Documents will be processed as indicated provided reproduction quality permits. If permission to reproduce is granted, but neither box is checked, documents will be processed at Level 1.

"I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic/optical media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries."

Sign here→ please

Signature: Kim Onn Yap	Printed Name/Position/Title: Kim O. Yap, Unit Manager	
Organization/Address: 101 S.W. Main, Suite 500 Portland, OR 97204	Telephone: 503-275-9587	FAX: 503-275-0450
	E-Mail Address: yapk@nwrel.org	Date: 8/20/97

CUA

THE CATHOLIC UNIVERSITY OF AMERICA
Department of Education, O'Boyle Hall
Washington, DC 20064

800 464-3742 (Go4-ERIC)

April 25, 1997

Dear AERA Presenter,

Hopefully, the convention was a productive and rewarding event. We feel you have a responsibility to make your paper readily available. If you haven't done so already, please submit copies of your papers for consideration for inclusion in the ERIC database. If you have submitted your paper, you can track its progress at http://ericae2.educ.cua.edu.

Abstracts of papers accepted by ERIC appear in *Resources in Education (RIE)* and are announced to over 5,000 organizations. The inclusion of your work makes it readily available to other researchers, provides a permanent archive, and enhances the quality of *RIE*. Abstracts of your contribution will be accessible through the printed and electronic versions of *RIE*. The paper will be available through the microfiche collections that are housed at libraries around the world and through the ERIC Document Reproduction Service.

We are soliciting all the AERA Conference papers and will route your paper to the appropriate clearinghouse. You will be notified if your paper meets ERIC's criteria for inclusion in *RIE*: contribution to education, timeliness, relevance, methodology, effectiveness of presentation, and reproduction quality.

Please sign the Reproduction Release Form on the back of this letter and stet **two** copies of your paper. The Release Form gives ERIC permission to make and distribute copies of your paper. It does not preclude you from publishing your work. You can mail your paper to our attention at the address below. Please feel free to copy the form for future or additional submissions.

Mail to: AERA 1997/ERIC Acquisitions
The Catholic University of America
O'Boyle Hall, Room 210
Washington, DC 20064

Sincerely,

Lawrence M. Rudner, Ph.D.
Director, ERIC/E