

**EVALUATION OF THE NEW YORK STATE/MOSCOW SCHOOLS  
TELECOMMUNICATIONS PROJECT**

Prepared for:

New York State Education Department  
Division of Elementary and Secondary Education

Prepared by:

MAGI Educational Services, Inc.

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## PREFACE

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The New York State Education Department commissioned an independent evaluation study to examine the implementation and impact of the New York State/Moscow Schools Telecommunication Project (the Project) during the 1990-91 school year.

The findings of the evaluation are based on information obtained through *Project Profiles*, *Documentation Logs*, and *Teacher and Student Surveys*. The study was intended to provide the New York State Education Department with data that would allow them to make adaptations as needed for the future operation of the Project and prepare the Project for possible submission for New York State Program validation. The instruments developed for the evaluation were administered in the spring of 1991. The study was not intended to measure or provide conclusive evidence of students' academic achievement. The challenge for the evaluators was to develop a comprehensive plan for understanding how this precedent-setting telecommunications project worked and what degree of impact it has had on learning.

The evaluators would like to express their special appreciation for the cooperation and assistance they received from the school project coordinators; they were candid and insightful in completing their *Profiles*, logs, and surveys. Dr. Michael Radlick, Director, Division of Elementary and Secondary Education, New York State Education Department; Mrs. Jane Barley, Associate, Bureau of Foreign Languages, New York State Education Department; and Peter Copen, President, Copen Family Foundation, assisted the evaluators in numerous ways during the past year, and we would like to acknowledge their helpfulness.

We would also like to express our appreciation for the cooperation of all staff and students from the participating districts for their completion of the evaluation activities.

## INTRODUCTION

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The world has become a "global village" with instant access to information and people around the world through technology. Our students need to be prepared to communicate in today's global environment.

The word "telecommunications" simply means communicating across distances. In its broadest sense, this definition includes communicating by any medium including radio, television, telephone, telegraph, and computer. Although other types of electronic telecommunication are extremely important in today's world, this project primarily utilized computer data communications and lumaphones.

Telecommunications can change education by bringing students and teachers out of the isolation of their classrooms and by promoting communication and collaboration with people throughout the world — an electronic community of learners. An assumption of the New York State/Moscow Schools Telecommunications Project is that the problems facing the world are created by people, either individually or collectively, and that these problems can be resolved through effective communications. Telecommunications can be the tool which brings people together in cooperative ventures to apply the attitudes and skills of effective listening and problem solving.

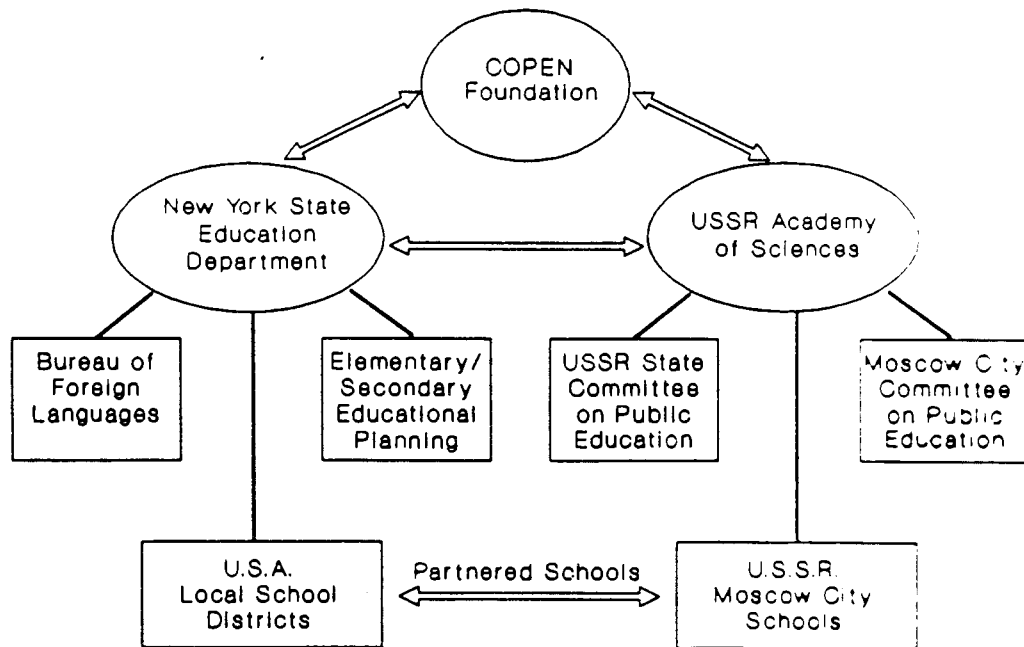
A basic operating premise of the New York State/Moscow Schools Telecommunications Project is that students learn and apply effective communication attitudes and skills by participating in concrete, meaningful projects which 1) reflect student concerns, 2) are designed to solve problems, and 3) make a contribution to society. It is to this end that the New York State/Moscow Schools Telecommunications Project was conceived.

On United Nations Day, October 24, 1988, students in selected Moscow schools sent their first electronic mail (E-mail) messages to partners in New York State high schools. This event marked the official beginning of the New York

State/Moscow Schools Telecommunications Project, a unique three-year plan for international cooperation in education research. This project, the first of its kind between the United States and the Soviet Union, is the result of an agreement signed by Yevgeny Velikhov, Vice President of the USSR Academy of Sciences, and Peter Copen, President of the Copen Family Foundation.

Thirteen schools in each country were identified as project schools. In Moscow, the project work was coordinated by the Scientific Council of Cybernetics of the USSR Academy of Sciences, with assistance from the USSR State and Moscow City Committees on Public Education. In New York, the State Education Department worked with the Copen Family Foundation to provide participating schools with direction and support. (See **Figure 1** for project organizational chart).

Figure 1  
 Schema of Collaborative Relationships  
 in the Project



The New York State/Moscow Schools Telecommunications Project began as a pilot project to discover the impact of computers and telecommunications on classroom instruction, student learning outcomes, intercultural understanding, and personal development. While communication on topics of personal interest to the participants was an important part of the project, the bulk of the work focused on the cooperative development of student-generated projects such as surveys, polls, articles, newspapers, research, analysis, and creative writing. These projects were intended to be problem-solving in nature and to produce results that could bring about a meaningful contribution to society on local, national, and/or international levels.

It was a premise of the Project that the problems facing the planet are created by people, either individually or collectively, and that problems among people can be resolved through effective communication. Telecommunications can be the tool which brings students together in cooperative problem-solving ventures.

## SUMMARY OF KEY FINDINGS

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*Has this Project had an impact on teachers and students?* The power of telecommunications lies in its capacity to create a new vision of learning in the classroom for teachers and students.

*"My work on the New York State/Moscow School Telecommunication Project. . . was without a doubt the most dynamic and rewarding educational experience I have had in my 22 years of teaching. This project not only offered. . . an opportunity to conduct primary research. . . but also provided us with a dynamic cross-cultural experience. . .".*  
(department chairperson).

Telecommunications changes education by bringing students and teachers out of the isolation of their classrooms by promoting learning, communicating, and collaborating with people throughout the world—an electronic community of learners:

*"The implications of elementary school children communicating on a regular basis with counterparts from the Soviet Union can only enhance efforts toward world peace."* (elementary principal)

*". . .working on my telecommunications project leads me to conclude that teleconferencing will be the medium through which students from all over the world will be brought together in this decade to communicate and work together in meaningful ways. I feel that the results of this will be a better world for all of us to live in."* (high school student)

The evaluation results showed **statistically significant results** between control group students and project participants in these key areas:

- project participants discussed political/social issues and international events more frequently than control group students, and

- project participants read at home more news magazines and books by authors from other countries more frequently than control group students.

The results suggest that the Project, indeed, made an impact upon students' awareness and their understanding of international issues and current events!

***Has this Project brought teachers and students "out of the isolation of their classrooms"?*** Community involvement and support for public education is critical in the attempt to restructure schools and prepare for the year 2000. ". . .we were able to share our findings and experiences with all of the members of our school and the adults in our district. . . making the New York State/Moscow Schools Telecommunications Project an important and memorable educational happening for our entire community." (department chairperson)

Students were able to bring information about their projects to local, state, and national attention because they could share what they produced. A sample of student portfolios developed as a result of their studies includes<sup>1</sup>

- booklets: American/Soviet Heroes, Joint Venture Project;
- magazines: Brotherhood of Children: A Literary Project;
- newsletter: Elementary School Mental Health Project; and
- newspapers: Democracy in the US and USSR, Newspaper Project studies: Environmental Education and Action Project, Genetics, Mars Mission.

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<sup>1</sup> See *New York State/Moscow Schools Telecommunications Project Profiles Phase I* booklet for a complete description of student Projects.



## EVALUATION DESIGN

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MAGI Educational Services, Inc. was contracted by the New York State Education Department (SED) to obtain information relevant to the key questions and goals of the Project as expressed by the SED and the Copen Family Foundation. Major project goals were

- to develop student-generated projects which make a meaningful contribution to people, society, and/or the world;
- to determine the impact of telecommunications on international understanding, teaching methodologies, and student learning;
- to enhance student learning of foreign languages as well as the cultures of different countries; and

In the context of these broad goals, the major challenge for the evaluators was to develop a comprehensive plan for understanding how this precedent-setting telecommunications project works and the degree of impact it has had on learning.

Since the project involved multiple partners with a range of interests and goals, the evaluation was approached from a systems perspective. The process component of the study focused on the key components of the Project, including a detailed description of each student project, an analysis of the Project delivery system, and an examination of the factors enhancing and inhibiting the collaborative partnership model. The outcome evaluation focused on areas of impact common to all participating groups.

Several major activities were undertaken to conduct the evaluation.

### **A. Development of a Generic Framework for the Project**

As a first step in the evaluation, the researchers developed a graphic and

narrative description of the key components of the project. This framework was used as a reference point for planning and implementing the project, as well as for developing the overall evaluation design (see **APPENDIX A**).

#### **B. Development and Implementation of a Documentation System**

A system for recording and evaluating student (and teacher) involvement in key activities associated with the major goals of the Project was developed. The system was used according to a "time sampling" format whereby individual logs were completed several times a week for a period of four weeks. Project students, their teachers, and a comparable group of control students completed the logs. The information gathered enabled the evaluators to provide an in-depth description of the amount of time project students (and teachers) engaged in intercultural-related activities. More importantly, the information allowed the evaluators to compare project and control students and, thereby, assess the impact of the Project on intercultural awareness.

#### **C. Development of a Project Profile Booklet**

As a means of enabling the Project to disseminate ideas and programs developed through the Soviet-American collaboration, the evaluators developed a the *New York/Moscow Schools Telecommunications Profile Phase I* booklet (see **APPENDIX B** for Profile Instrument). This comprehensive booklet contains detailed information about each student project; it serves both as an archival record of Project activities and as a resource of ideas for future program participants.

#### **D. Assessment of Teacher and Student Perceptions of the Project**

Several procedures were utilized to determine teacher and student reactions to the Project. These included

- 1. Site Visit/Interviews** — a visit was made to the *End of the Year Assembly* in order to review the local projects, and individual phone conversations

were held with several project sites to obtain more detailed information about the successes and difficulties with the Project.

**2. Surveys** — surveys were distributed to all students participating in the Project, to control groups of students, and to all participating staff at the local project sites. The surveys were the primary data source for describing the implementation and perceived impact of the Project. The survey respondents are described below. (See **APPENDIX B** for survey instruments)

**a) Student Survey** — 118 New York students responded to the survey. Descriptive Information follows.

- 1) 49% of the students were 11th or 12th graders; 50% were in the 9th or 10th grade.
- 2) 53% were female, and 47% were male.
- 3) 64% had participated in the Project last year.
- 4) 97% said that their schools had hosted the Soviet students on an exchange visit.
- 5) 24% actually visited the Soviet Union.

**b) Teacher Survey** — 14 New York State teachers from 8 participating sites responded to the survey.

Data analysis for the evaluation study involved the computation of descriptive statistics, including percentages and means. Beyond the descriptive statistics, a variety of parametric and non-parametric procedures were used to examine relationships among variables.

## STUDY FINDINGS

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The sections that follow describe the key findings of the study. The findings are organized according to three headings:

- A. Project Impact
- B. Project Satisfaction
- C. Project Constraints.

### A. Project Impact

#### 1. Documentation System

To provide an objective assessment of Project impact on students, the evaluators conducted a rigorous time sample study of students' in-school and out-of-school activities. The purpose of the study was to determine the amount of time (days) that students engaged in activities directly associated with the major goals of the Project.

To conduct the study, 50 project students and a similar number of control students<sup>2</sup> were asked to complete a *Student Log*. The log listed a series of activities related to intercultural understanding and personal development (see **APPENDIX B** for the *Student Log*). Students were instructed to complete the log two times a week for a period of four weeks. At each recording period, the students were asked to check any activity in which they engaged that day (in school) or the day before (after school or at home). Although the activities were associated with the goals of the New York State/Moscow Schools Telecommunications Project, they were not unique to the Project. That is, they could be considered reasonable outcomes of any educational program that focused on intercultural awareness (e.g., foreign language, social studies, etc.).

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<sup>2</sup> The control students were selected from other class sections of the teachers who were involved with the Project.

Approximately 1,000 logs were completed by the students — 400 by project students and 585 by the control students.<sup>3</sup> The logs were analyzed by computing frequencies and percentages for each activity listed and then translating the percentages into days. For example, 20% was translated into one school day per week (i.e., .20 x 5) or four school days per month (i.e., .20 x 22 days).

Pertinent results are displayed in **Figure 2**. The figure identifies only those activities that yielded statistically significant differences between project students and the control groups.

As this figure illustrates, project students spent significantly more time than their control counterparts in the following activities.

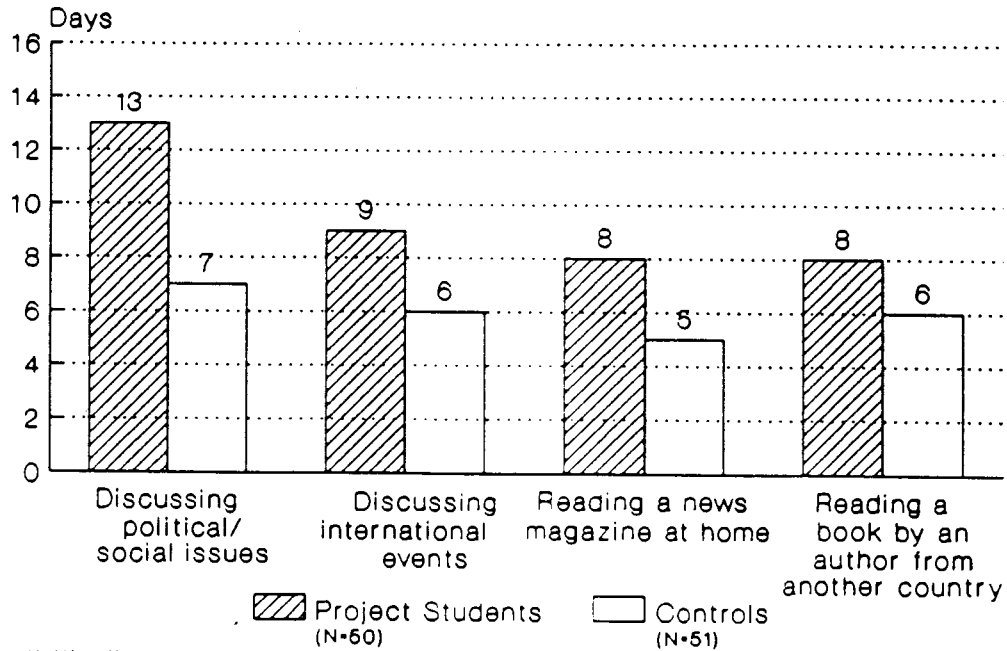
- a. discussing social and/or political issues — average 13 days per month versus 7 days for control students.
- b. discussing international events — average 9 days per month versus 6 days for control groups.
- c. reading news magazines at home — average 8 days per month versus 5 days for control students.
- d. reading a book by an author from another country (apart from teacher assignments) — 8 days per month versus 6 days for control students.

*"Our telecommunications program was a fabulous way to further improve Soviet-American cooperation and cultural understanding. I can think of no better educational experience that a teenager can have."* (student)

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<sup>3</sup> These numbers were well within the time sampling guidelines for statistical reliability and generalizability.

Figure 2  
 Number of Days Per Month Project  
 Students and Controls Spent in  
 Activities\* Associated With Intercultural Understanding



\* All activities listed resulted in statistically significant differences between project and control students.  
 Source: Student Logs

The results thus suggest that the Project, indeed, made an impact upon students' awareness and their understanding of international issues and current events.

## 2. Problem-Solving Projects

In terms of **joint projects**, many innovative problem-solving approaches were developed (see the *Cross Reference Summary Chart* on page 17 for the scope of joint projects). These projects each utilized at least one of three models.

- a. *Parallel Problem Solving Approach*, in which each school independently completed a study of the same problem and then shared the results with the partner school;

- b. *Resource/Consultant Approach*, in which each school studied the topic in the same way and used the partner school as a resource to obtain information;
- c. *Integrated Group Problem Solving Approach*, in which every aspect of the project was planned, implemented, and analyzed cooperatively.

In most cases, the parallel problem solving approach was the model of choice. Consistent with this approach, teacher collaboration occurred most frequently with project "start-up" activities.

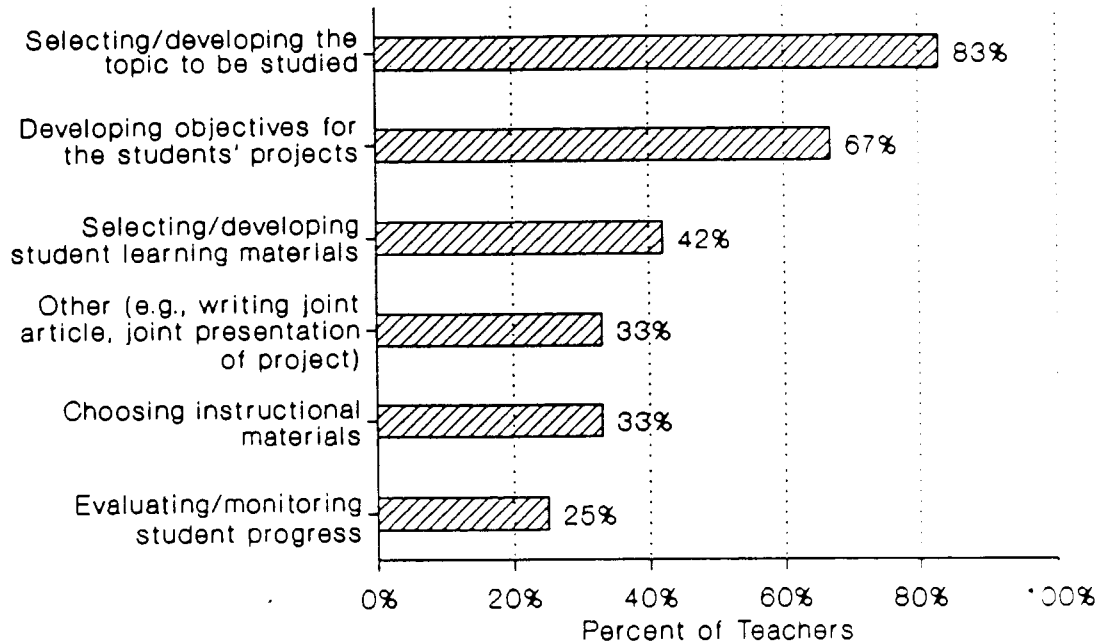
- 83% of the teachers collaborated with their Soviet colleagues on selecting topics for the student projects, and 67% jointly developed student objectives with the Soviets. Collaboration was less frequent relative to everyday instructional activities such as selecting student learning materials, choosing instructional methods, or evaluating student progress; only about one-third of the teachers reported joint work in these areas (see **Figure 3**).

# Cross Reference Summary Chart of All Programs By Audience and Content

	Audience				Broad Content Areas								
	Elementary	Middle School	High School	K-12	Cultural Understanding	Environment	Foreign Language	Literature	Music	Science	Social Studies	Writing	Business
The American/Soviet Hero Project			X				X				X	X	
Brotherhood of Children: A Literary Project				X			X				X		
Democracy in the US and USSR			X								X		
DNA Education Project (DNAEP)			X						X				
Elementary School Mental Health Project (ESMHP)	X										X		
Environmental Education and Action Project (EEAP)	X		X		X								
Genetics			X						X				
Joint Venture Project (JVP)			X								X	X	
Literature Project			X			X	X						
Man in the Big City: Air Pollution			X		X								
Mars Mission			X						X				
Media Coverage			X		X	X					X		
Newspaper Project (NP)			X								X	X	
Opening the Door			X								X		
School of the 21st Century			X			X					X		
A School Portrait			X								X		
Sociological Survey of Soviet/American Teenagers' Problems			X		X	X							
A Songwriting Workshop: Hello Watervliet! ZDRAVSTVISTE MOSKVA!		X						X					
Stalin and Stalinism			X								X		
Tall Tales	X					X	X					X	
The Water Pollution Project			X						X				
What Do You Do When You're Not in School: A Comparative Study			X		X								



Figure 3  
Common Areas of Collaboration for  
American and Soviet Teachers



(N=12)

Source: *Teacher Survey*

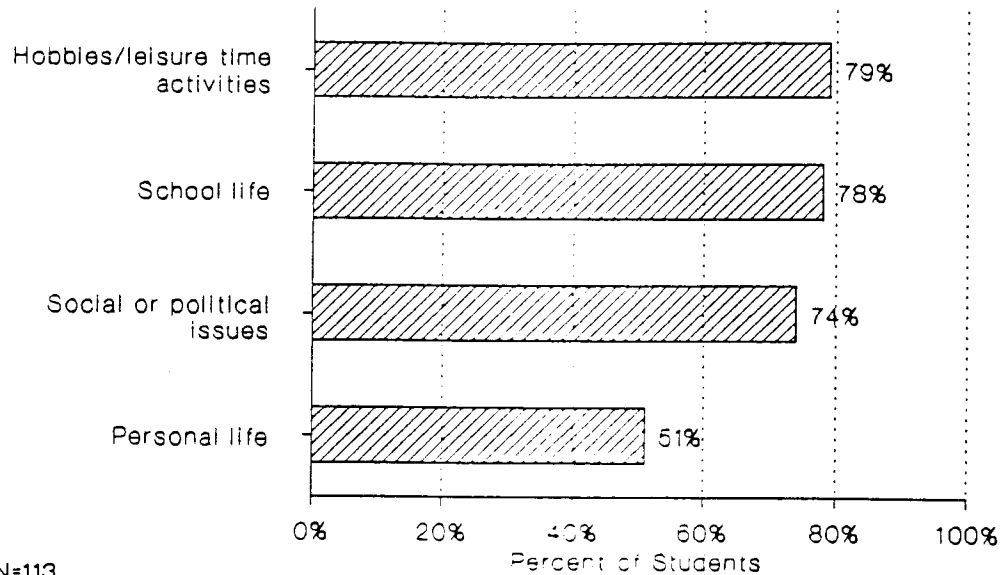
Students who were involved with the joint projects said that they discussed a variety of issues with their Soviet partners (see Figure 4).

- Three-quarters or more discussed social or political issues, school life, and hobbies and leisure time activities with Soviet students.
- 69% of the students reported communicating in Russian during these discussions.
- Two-thirds of the students said that they made a friend(s) with a Soviet student(s) as a result of project work and discussions.

## 2. Project Benefits

The staff and students were also asked about the *perceived student benefits* of the program. Results confirmed that the project has an impact on increased cultural awareness and knowledge of international events.

Figure 4  
Issues Discussed with Soviet Students  
During Joint Projects

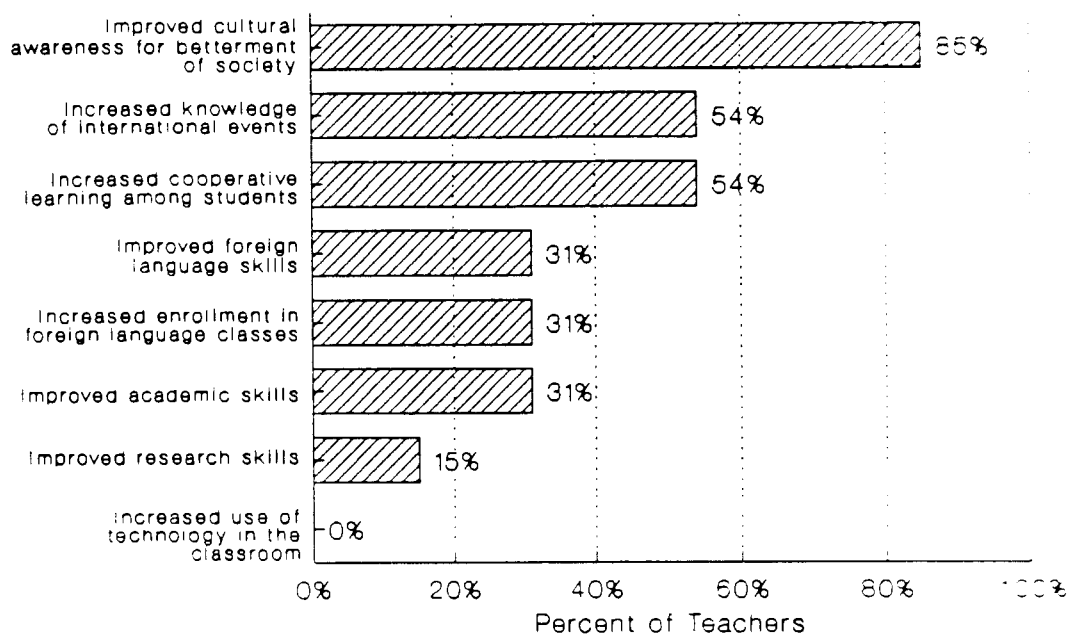


- From a list of eight (8) possible student benefits, one was selected by more than half the staff — *improved cultural awareness for the betterment of society and the world at large*. Here, 85% of the staff felt that the Project made an important difference in the lives of students (see Figure 5). Other areas of impact selected by a large number of staff included
  - *increased cooperative learning among students (54%)* and
  - *increased student knowledge of international events (54%)*.

Fewer staff members (i.e., 30% or less) perceived impact on the students' academic or research skills, their enrollment in foreign language classes, or their use of technology in the classroom as a result of the Project.

- The majority of students felt that their Project experiences were helpful (see Table 1).
  - In one area — appreciation of other cultures — most students (70%) felt that the Project helped them *a lot*.
  - Nearly half the students felt the project helped them *a lot* to increase their knowledge of international events (47%), make new friends with Soviet students (47%), and get along better with others (40%).

Figure 5  
Teacher Perceptions of Project Impact  
on Students



(N=13)

Source: *Teacher Survey*

Table 1  
Student Perceptions of Project Impact

How much did your project experiences help you to . . .	Level of Impact		
	A Lot	A Little	Not Much
appreciate other cultures?	70%	23%	6%
get along better with others?	40%	43%	17%
make new friends with Soviet students?	47%	33%	18%
use computers more often?	27%	25%	46%
discuss world issues with friends and adults?	34%	35%	31%
improve your foreign language skills?	36%	33%	29%
improve your research skills?	23%	35%	40%
improve your academic skills?	20%	36%	43%
increase your knowledge of international events?	47%	42%	11%
develop a closer relationship with your teacher?	31%	43%	25%

N=114

The evaluation also examined teacher change as a result of the Project. The data were quite positive.

- In three of the seven areas assessed, 50% or more of teachers felt that they had been personally affected by their Project activities (see **Table 2**):
  - 70% felt their professional development had improved,
  - 54% indicated improved understanding of international events, and
  - 54% said they became more involved with causes.

**Table 2**  
**Teacher Perceptions of Self-Change as a Result of Project Involvement**

	Level of Change		
	Improved	Remained the Same	Worsened
My morale has	31%	54%	15%
My attitude towards cooperative student learning projects has	31%	70%	—
My repertoire of teaching strategies has	31%	70%	—
My use of technology in the classroom has	39%	62%	—
My professional development has	70%	31%	—
My understanding of international events has	54%	46%	—
My involvement with causes for the betterment of society and world peace has	54%	46%	—

(N=13)

In summary, staff and student attitudes towards the New York State/Moscow Schools Telecommunications Project were positive. Students indicated major impact in their ability to appreciate other cultures. Teachers perceived a major impact on their professional development. Staff and students felt that the Project benefitted students. In one area —

improved international awareness — both staff and students experienced positive growth.

## **B. Project Satisfaction**

To a large extent, the effectiveness of an educational program can be gauged by participant reactions to project activities. The degree to which staff and students are satisfied with project activities and believe that the project resulted in important benefits are critical factors in program success. Overall reactions to the New York State/Moscow Schools Telecommunications Project are summarized below.

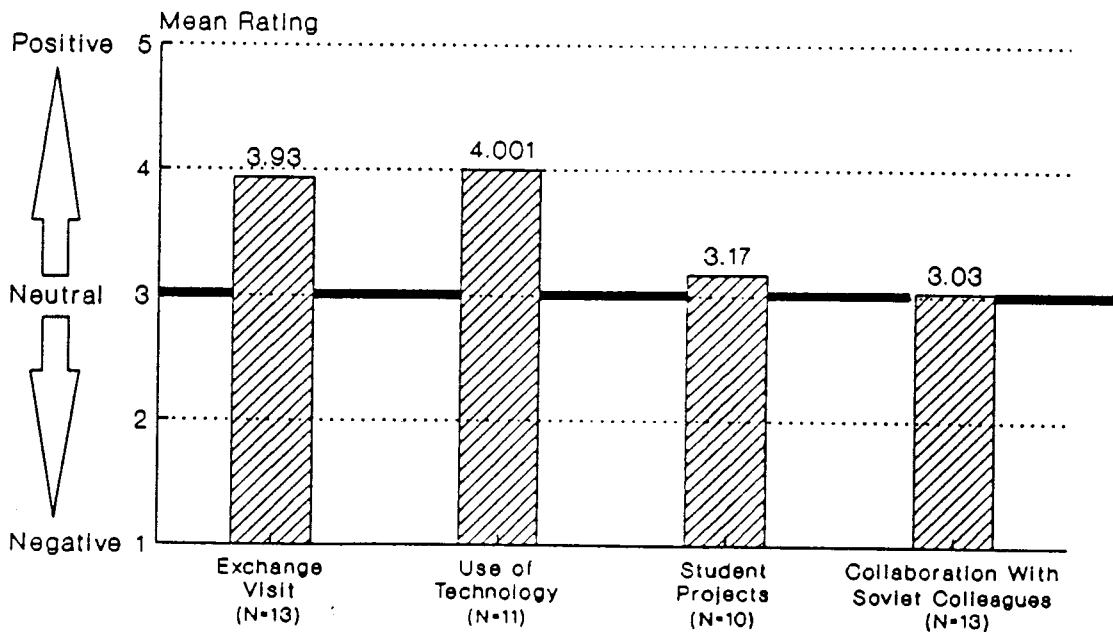
- The majority of staff were *very satisfied* with the Project's impact on student attitudes towards other cultures (64%). Nearly half of the staff were *very satisfied* with the district's commitment to the Project (46%) and the Project's impact on student cooperation with others (46%). Conversely, only one area received a *not at all satisfied* rating from nearly half of the staff (40%) — amount of planning time allotted (see **Table 3**).
- Of the four unique Project components (i.e., Student Exchange Visits, Use of Technology in the Classroom, Student Problem Solving Projects, and Collaboration with the Soviets), staff felt most positively about the classroom technology applications and exchange visits (see **Figure 6**).
  - During the visits staff felt *knowledgeable, excited, productive, and successful*. They felt similarly while using technology in the classroom.
  - However, staff felt moderately positive towards collaboration with Soviets expressing a sense of boredom and frustration. They also felt more *bored* than *excited* towards the students' problem-solving projects.

**Table 3**  
**Teacher Satisfaction with the**  
**New York State/Moscow Schools Telecommunications Project**

	Satisfaction Level		
	Very Satisfied	Somewhat Satisfied	Not At All Satisfied
The New York State/Moscow Schools Telecommunications Project, in general	18%	73%	9%
District commitment to the project	46%	36%	18%
Amount of training you received	18%	55%	27%
Amount of planning time allotted	10%	50%	40%
Project impact on student attitudes towards other cultures	64%	27%	9%
Project impact on student cooperation with others	46%	46%	9%
Project impact on student foreign language skills	33%	56%	11%
"Performance" of the technology	10%	70%	20%
Communication with Soviet colleagues	27%	36%	36%

N=11  
 Source: *Teacher Survey*

Figure 6  
 Teacher Ratings of Unique  
 Project Components



Note: These are summary ratings based on six sets of polarized descriptors. The descriptors were 1) Confused - Knowledgeable, 2) Excited - Bored, 3) Uncertain - Confident, 4) Tense - Relaxed, 5) Productive - Frustrated, and 6) Successful - Unsuccessful.

Source: *Teacher Survey*

- Overall, the majority of students expressed feelings of satisfaction with all components of the project. The majority of students (61%) assigned a rating of *very satisfied* with one project activity – student exchange visits (see **Table 4**).

**Table 4**  
**Student Satisfaction With Project Activities**

	Satisfaction Level		
	Very Satisfied	Somewhat Satisfied	Not At All Satisfied
Using E-mail (N=109)	39%	46%	15%
Using lumaphone conferences (N=89)	42%	38%	20%
Student exchange visits (N=103)	61%	30%	9%
The topic you studied (N=110)	46%	50%	5%
Working with Soviet students on the project (N=110)	42%	46%	13%
End of year ceremonies in Staten Island (N=40)*	28%	30%	

Source: *Student Survey*

*"...While friendship may not be the best support for a joint venture business, it seems that it is in life ... Joint ventures may come and go, but my memories of the time I spent living with my Russian family will stay with me forever." (student)*

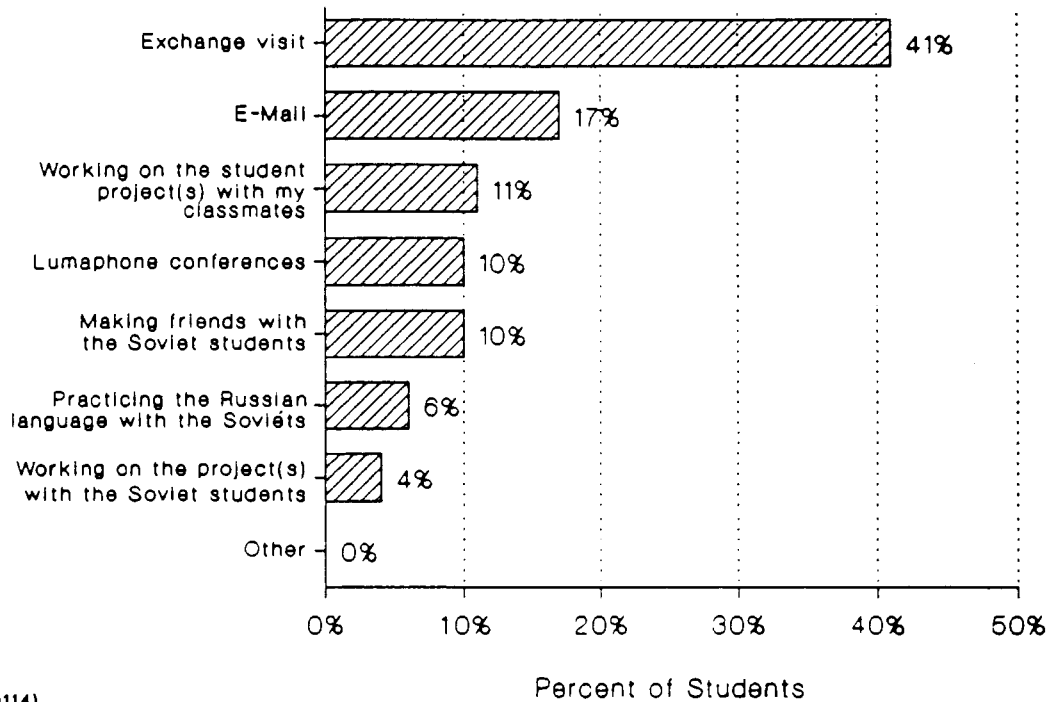
In most cases, students were evenly divided within the *very* and *somewhat satisfied* rating categories for the other areas probed.

- Exchange visits were viewed as the most beneficial Project activity by nearly half of the students (see **Figure 7**). Fewer than one-fifth of the students identified any other project activity as particularly beneficial. These activities included E-mail, lumaphone

conferences, Soviet friendships, student projects, and use of the Russian language.

- *In no case* did the majority of students express dissatisfaction with the Project.

Figure 7  
Students' Perceptions of the Most Beneficial Project Experience



### C. Project Constraints

Educational innovations, particularly long-distance technology programs such as the New York State/Moscow Schools Telecommunications Project, are not always executed as designed. Factors such as time/scheduling problems, availability and/or "performance" of the technology, and other equipment/resources, planning time, and logistical problems often act as obstacles to systematic implementation. The current evaluation, therefore, examined the extent of implementation across the various Project sites, including the

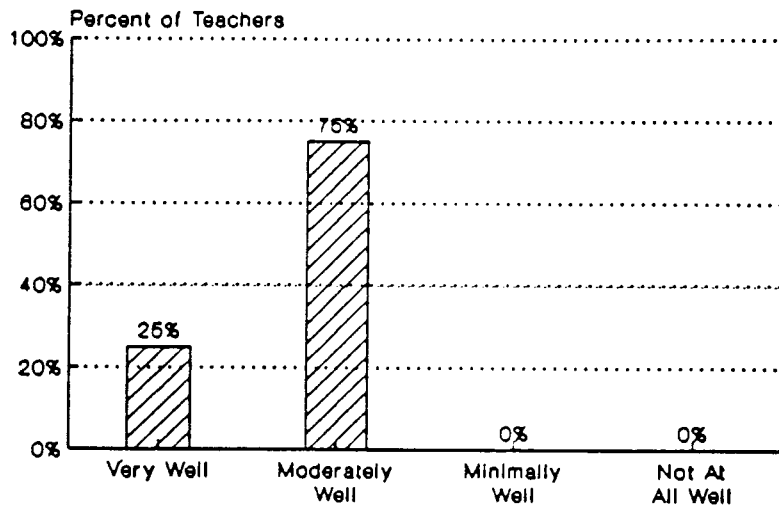


obstacles encountered by the staff and students. The results of this investigation were mixed. Although many different and exciting student projects were developed and successfully implemented, full implementation varied by site.

- Eight of the 13 participating schools (62%) indicated that they did conduct a joint student project with the Soviets this year.
- Fifty-seven percent (57%) of the staff reported that they received training to prepare them for their Project responsibilities.
  - All staff who received this training (100%) felt *very well* or *moderately well* prepared for Project activities (see **Figure 8A**).
  - Over 75% of the staff, however, felt there should have been more inservice training for technology applications, and 69% thought there should have been more inservice for cooperative learning projects (see **Figure 8B**).
- Among those sites that did conduct a joint project, communication exchange could be described as both *occasional* and *somewhat difficult*.
  - Less than half of the staff (46%) said that they collaborated with their Soviet colleagues more frequently than a *few times each semester* (see **Figure 9A**).
  - The frequency of exchange among the Soviet and American students was similar to that of the teachers (see **Figure 9B**). A little over half of the students (53%) reported working together with the Soviets *once to several times a week* or *a few times each month*; the remaining 47% said that they were in contact *a few times each semester* or less frequently. Contact typically occurred during school hours, although 42% of the students reported working together with their Soviet partners before school, and 34% said they did so after school.

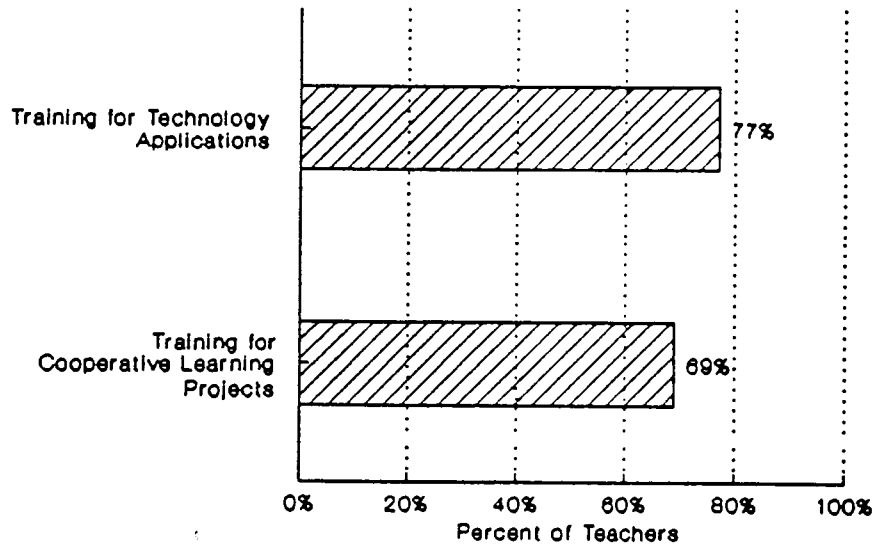
## Figure 8 Teacher Reactions to Inservice Training Activities

### A. Extent to Which Teachers Felt Prepared for Their Project Responsibilities



(N=8)

### B. Teacher Desire for More Inservice Training



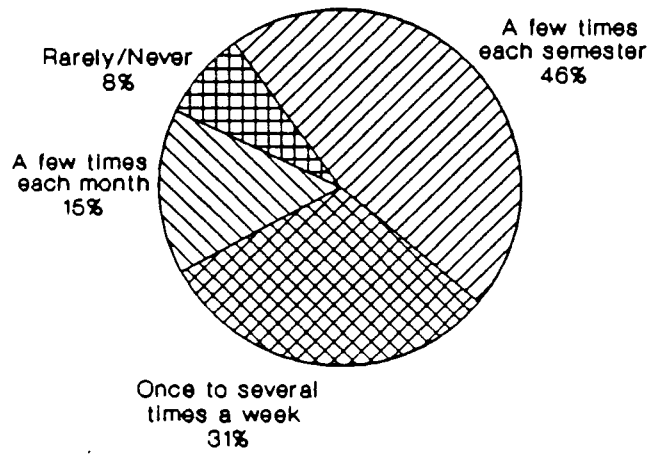
(N=13)

Source: *Teacher Survey*

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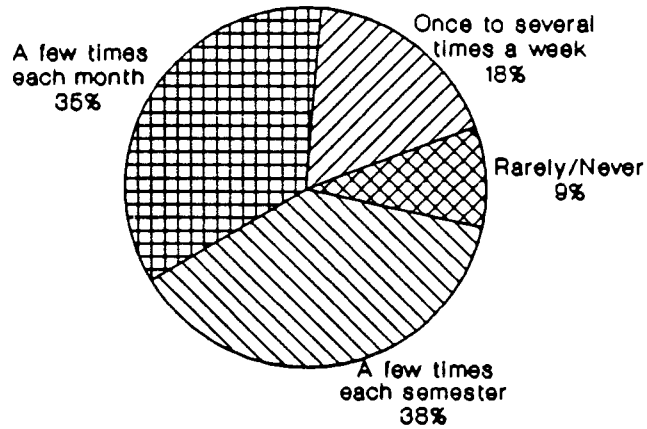
Figure 9  
 Frequency of Contact Between American  
 and Soviet Teachers and Students

A. Teacher to Teacher Contact



(N=13)

B. Student to Student Contact



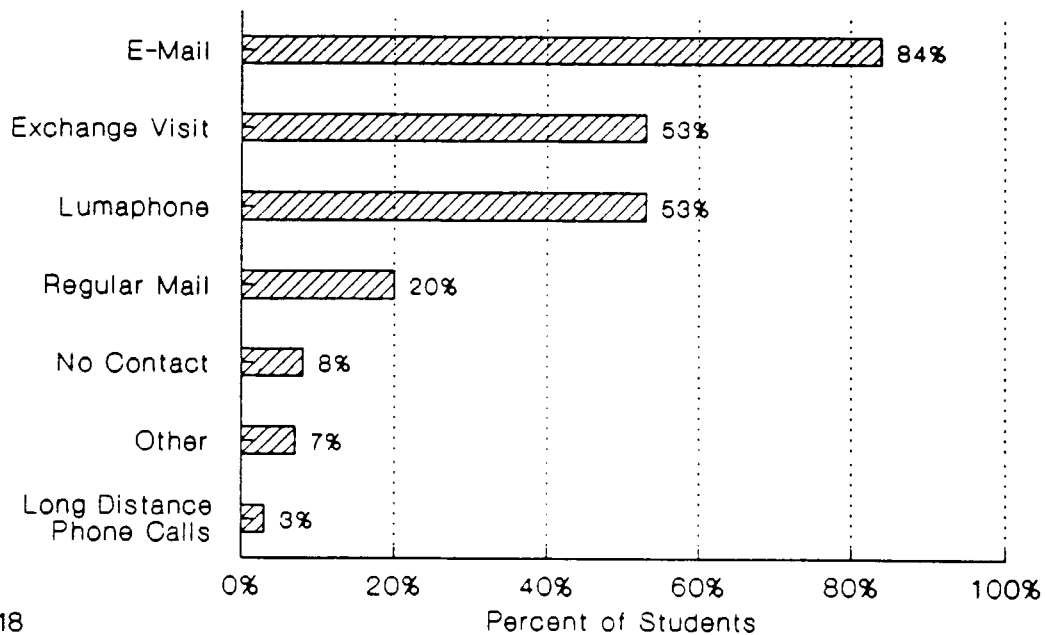
(N=116)

Source: *Teacher and Student Surveys*

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- E-mail was the method of communication used most frequently by students, with 84% reporting contact through this medium. More than half of the students also made contact during exchange visits (53%) and via lumaphone (53%). Regular mail contact was rare, as was telephone contact (see **Figure 10**).

Figure 10  
Communication Method Used By Students  
to Contact Soviet Partners



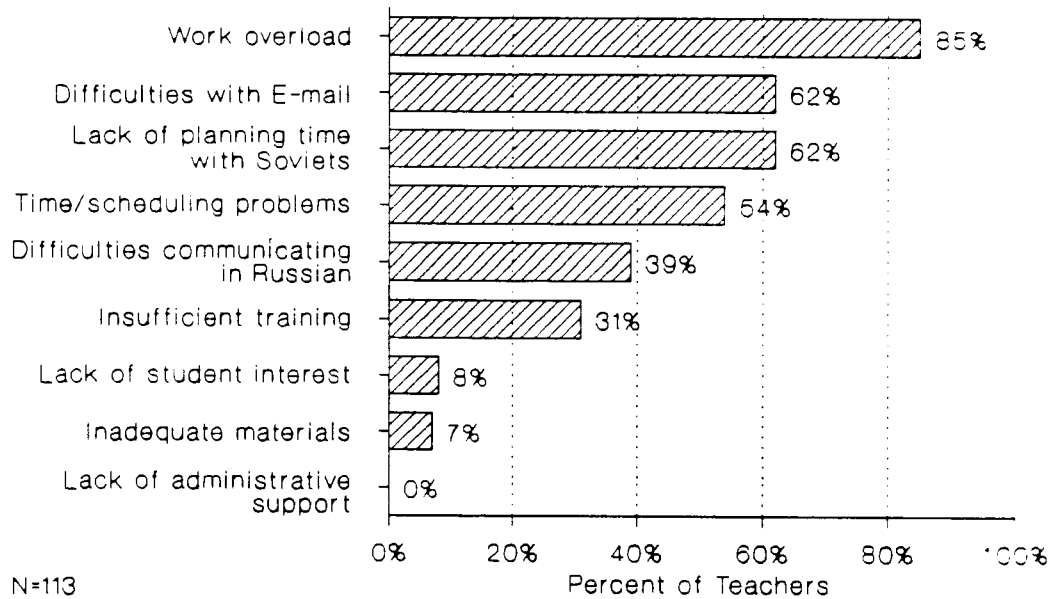
Source: *Student Survey*

- For the most part, students found communicating with their Soviet partners neither easy nor difficult. On a five-point Likert-type scale (1 = difficult; 5 = easy), the average rating was 3.01.
- Teachers felt that certain factors restricted the successful implementation of the Project. Among the factors most frequently cited by staff were the following (see **Figure 11**):
  - work overload (85%),
  - difficulties sending and receiving information via E-mail (62%),

- time/scheduling problems (54%), and
- lack of planning time with Soviet colleague (62%).

In addition, one-third of the staff felt that communicating in another language and insufficient training hindered Project operations. On the other hand very few teachers thought that insufficient resources, inadequate materials, lack of student interest, and lack of administrative support were obstacles to Project implementation.

Figure 11  
Teacher Perceptions of Obstacles  
to Project Implementation



- Eighty-six percent (86%) of the teachers thought that there should have been more planning time with their Soviet colleagues, and 46% felt that more planning time was needed with in-district staff as well.

In summary, many exciting student projects were developed! Specific constraints, such as lack of planning time, work overload, and general communication problems (e.g., use of E-mail and communicating in another language) appeared to hinder the extent of full Project implementation at all 13 sites.

## SUMMARY AND CONCLUSIONS

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The purpose of this evaluation was to describe the implementation and impact of the New York State/Moscow Schools Telecommunications Project. A primary concern was to probe the extent to which the Project had achieved the intended goal of contributing to international understanding for the betterment of society. Based upon both perceptual and objective evidence, it appears that the Project was successful in this regard. Specifically, the data revealed that the Project

- helped students to improve their intercultural awareness and understanding,
- helped to increase the amount of time that students spent in intercultural-related activities such as discussions of social and/or political issues and discussions of international events, and
- helped to improve teacher understanding of international events and their involvement with causes for the betterment of society.

In terms of implementation, the New York State/Moscow Schools Telecommunications Project used technology to create an environment in which a community could be brought together to create a shared educational experience. A number of exciting student projects were developed, with most of them operating independently with a moderate amount of information sharing with the Soviets. Teachers indicated that they were constrained in their attempts to collaborate with the Soviets due to lack of planning time, work overload, and general communication problems (e.g., use of E-mail and communicating in another language) which appeared to restrict the full extent of Project implementation. Both students and teachers expressed feelings of satisfaction with the Project.

There is no question that the New York State/Moscow Schools Telecommunications venture made a difference. The student-generated problem solving projects stimulated thinking as well as changed behaviors. As a result,

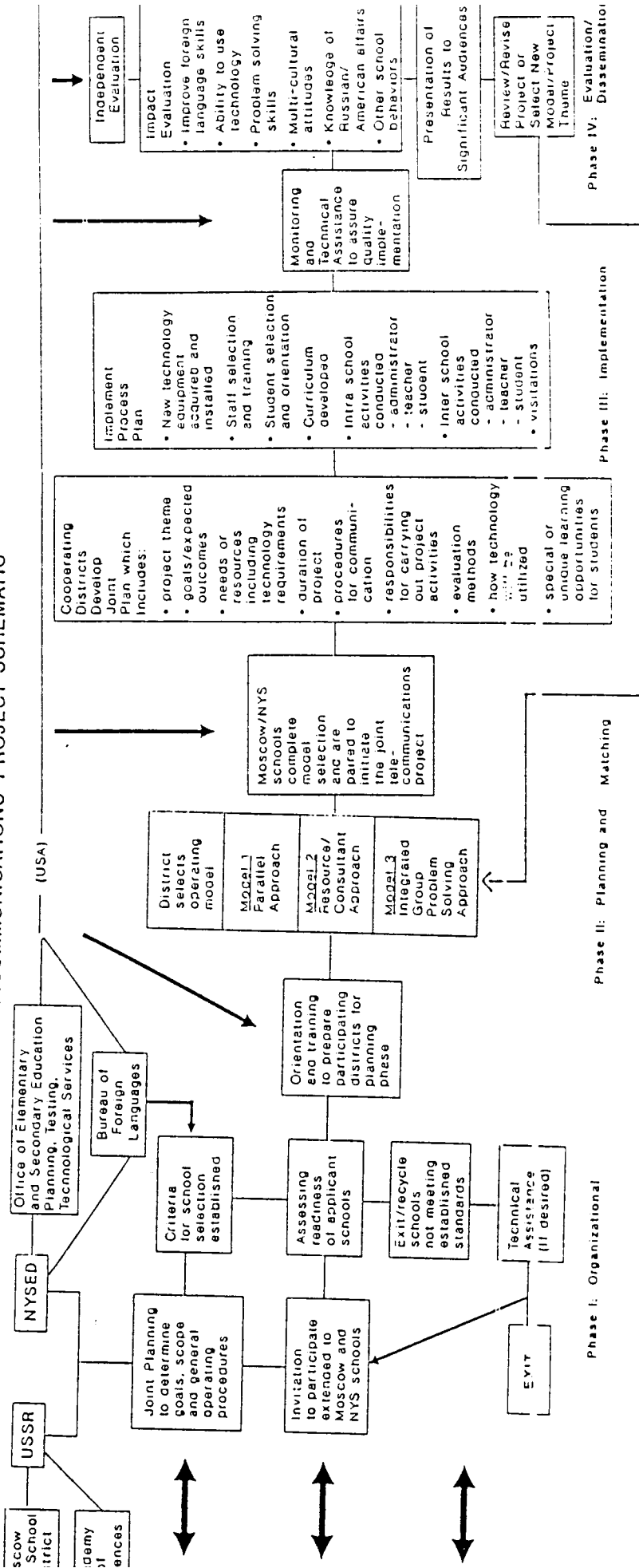
both students and teachers became more aware and appreciative of intercultural concerns.

In the **INTRODUCTION** to this report, it was noted that "*telecommunications can change education by . . . promoting collaboration with people throughout the world*". The exchange that did occur helped both students and teachers to better function in today's global environment!

## APPENDIX A



# MOSCOW TELECOMMUNICATIONS PROJECT SCHEMATIC



## MOSCOW TELECOMMUNICATIONS PROJECT

### Program Planning Schema: Implementation Consequences of Curriculum Choices

Project Entry	Student Access		School Access		Interdisciplinary Options		Technology Integration		Curriculum Integration		Multi-Cultural Understanding		Problem Solving		Special Comment
	1 limited	5 broad	1 limited	5 broad	1 limited	5 broad	1 limited	5 broad	1 limited	5 broad	1 limited	5 broad	1 limited	5 broad	
Russian Foreign Language	✓		✓				✓		✓		✓		✓		Ease of communication; good lab experience
International Studies	✓		✓		✓		✓		✓		✓		✓		Potential inter-disciplinary with Foreign Language
1	✓		✓		✓		✓		✓		✓		✓		Likelihood of prior computer use
nce	✓		✓		✓		✓		✓		✓		✓		Likelihood of prior computer use
ish	✓		✓		✓		✓		✓		✓		✓		
d/Talented	✓		✓		✓		✓		✓		✓		✓		Potentially sophisticated work/PR for whole project
-School	✓		✓		✓		✓		✓		✓		✓		Does not fringe on class time; no credit; high motivation

**APPENDIX B**

## PROJECT PROFILE

**Title:** (the name of your project)

**Audience:** (age/grade of the students: content area; if project part of the class, after-school, etc.)

**Problem Studied:** (see Checklist "Problem Studied")

**Technology/Communication:** (see Checklist "Technology..")

**Requirements:** (indicate what special requirements exist, if any, for the students and staff to successfully complete the project: prerequisite student skills, staffing needs, staff release time, cost estimates to the district, etc.)

**Outcomes:** (see Checklist "Outcomes")

**Contact Person:** (name, title, school address, school phone number, and fax number if appropriate)

# NEW YORK STATE/MOSCOW TELECOMMUNICATIONS PROJECT

## Instructions for Completing the Project Profile

Each project profile should be a one to two page narrative following the format on the attached page. If you have completed more than one study during the project, please complete a Project Profile for each study. For example, if the students had completed a project studying the effects of pollution in their communities in the fall, and completed a project comparing teenage lifestyles in the spring, you would submit two Project Profiles.

In each section of the Profile, specific information is requested to provide a comprehensive narrative description of the project. To assist project coordinators in writing their narrative, a checklist of sample key questions to consider has been provided.

Please use the Checklists to help you compose the comprehensive profile summary - but do not feel limited by the checklists. We do ask that **you mark that checklist where it is appropriate and return it to us with your profile**. This will help us in creating a data base of the projects.

## Checklist for Completing the "PROBLEM STUDIED" Section

Overall, a short comprehensive narrative should indicate which problem solving model was selected, the goals and major activities of the project, special characteristics of the project, and the broad classroom management and instructional strategies which supported the project. When you are completing this section the following categories may be helpful to you in structuring your response:

### 1. Problem-Solving Model

Parallel Approach:

Each school completed a study of the same problem independently and shared the results with each other.

Resource/Consultant Approach:

Each school studied the same topic in different ways and used the partner school as a resource/ consultant to obtain information. The result was two separate projects which have been enhanced by the information provided by the partner school.

Integrated Group Problem Solving Approach:

Each phase of the study was conducted jointly and every aspect was planned, implemented, and analyzed jointly. One product represents the work of both schools.

### 2. Project Goals

Academic Goals  
skills:

content:

Affective Goals  
attitudes:

behaviors:

## Checklist for Completing the "TECHNOLOGY/COMMUNICATION" Section

Overall, you should indicate in this section what communication strategies and what technology was used to support the project specifying the type of equipment, accessibility, and the frequency. When you are completing this section the following categories may be helpful for you to consider in structuring your response:

1. **Technology Used:** (Check [✓] all that apply)

Technology Used	Frequency			
	Occasionally	Weekly	Monthly	Other
States: regular mail/regular long distance phone calls				
E-Mail				
Lumaphone				
Teleconferencing				
Video Disks				
Use of computer networks; local area/regional/national/international				
Predominant technology used				
Other _____				

2. **Interpersonal Communication:**

- A. student to student frequency with Moscow:  
 \_\_\_ daily times per week \_\_\_ or month \_\_\_ or semester \_\_\_
- B. teacher to teacher frequency with Moscow:  
 \_\_\_ daily times per week \_\_\_ or month \_\_\_ or semester \_\_\_
- C. overall student interactions within the classroom:  
 \_\_\_ independent work \_\_\_ teams \_\_\_ cooperative learning, etc.
- D. overall teacher/ student interactions within the classroom:  
 \_\_\_ teacher directed \_\_\_ teacher/ facilitator role

**3. Broad Instructional Strategies**

A. Type(s) of Student Grouping Used for the Project

- entire class
- honors class
- regular class
- special class: voluntary, after school, club (formal program)
  
- other: \_\_\_\_\_

B. Who provided assistance to the students during the Project?

- regular classroom teacher
- other teacher(s) in building with specialized expertise:  
\_\_\_\_\_
- other teacher(s)/ staff in the district with specialized expertise:  
\_\_\_\_\_
- community person with specialized expertise
- parent
- other students

C. Content Area of the Project

- social studies     foreign language     math     science
- English class     other \_\_\_\_\_

D. Curriculum Integration

- Project was:  conducted as a single subject matter project  
 conducted as an interdisciplinary project with another teacher

**4. Broad Classroom Management Strategies**

A. Project duration: \_\_\_ days \_\_\_ weeks \_\_\_ semester \_\_\_ full year

B. Project was integrated into the students' academic experience

- for extra credit only (extracurricular experience)
- as part of the regular curriculum but limited to a specific unit (e.g. 3 week unit on \_\_\_\_\_)
- fully integrated into the major content area for the entire year
  
- other \_\_\_\_\_



## Checklist for Completing the "OUTCOMES" Section

Overall, you should indicate in this section the intended benefits for the students in studying this particular problem, any acquired skills the students may learn in the use of technology, improved fluency in foreign language, interpersonal communication, etc., and any attitudinal changes, if any, anticipated. When you are completing this section the following categories may be helpful for you to consider in structuring your response:

### Learner Outcomes:

- problem solving skills
- interpersonal skills
- cooperative learning skills
- foreign language
- cultural awareness
- understanding current events in the other country
- research skills
- other

**New York State/ Moscow Schools  
Telecommunications Project**

**Teacher Survey**

This survey is being administered by MAGI Educational Services, Inc. as part of an independent evaluation of the project. Your candid responses to all survey items will be greatly appreciated.

1. To what extent were you involved in each of the following New York State/Moscow Telecommunications Project activities?

	LEVEL OF INVOLVEMENT			
	Extensive	Moderate	Minimal	None at all
a. Establishing the overall goals and objectives of the state-wide project				
b. Developing the overall state-wide project design				
c. The initial decision to implement the project in your district				
d. Developing the student projects				
e. Developing curricular materials for the study projects				
f. Publicizing the program to colleagues and the community				
g. Ongoing planning and decision-making for the program in your district				

2. Do you have a clear understanding of the goals of the New York State/Moscow School Telecommunications Project?

Yes                       No                       Not sure

3. How committed are you to the goals of the New York State/Moscow School Telecommunications Project?

Very committed                       Minimally committed                       Don't know  
 Moderately committed                       Not at all committed

4. Did you receive training for your New York State/Moscow Schools Telecommunications Project responsibilities?

Yes                       No

If Yes, how well did the training prepare you?

Very well                       Minimally well  
 Moderately well                       Not at all well

5. Do you think that there should have been more staff development activities? Please respond to each of the following:

	Yes	No	Not Sure
a. Inservice training for technology applications			
b. Inservice training for cooperative learning projects			
c. Planning time with Soviet colleagues			
d. Planning time with in-district staff			
e. Other staff development _____			

Please list some training topics that would have helped you with your New York State/Moscow Schools Telecommunications Project responsibilities.

6. About how often did you communicate/collaborate in the Learning Circle?

- About once to several times a week       A few times each semester  
 A few times each month                       Never

7. With whom did you communicate most often within the Learning Circle?

- American participants       About the same with American and Soviet participants  
 Soviet participants

8. Did you form a specific collaborative partnership with another school to study a particular topic within the Learning Circle?  Yes       No

If Yes, with whom?

- An American school       Both an American and Soviet school  
 A Soviet school

9. When did you usually enter information by E-mail in the Learning Circle?

- During preparation periods       Before school       After school  
 During class periods               During lunch periods

10. If you formed a specific collaborative partnership with another school within the Learning Circle did you engage in any of the following activities? (Check [✓] all that apply)

- |   |  |
|---|--|
| <input type="checkbox"/> Lumaphone conferences  | <input type="checkbox"/> Long distance phone calls |
| <input type="checkbox"/> Exchange visits        | <input type="checkbox"/> None of the above         |
| <input type="checkbox"/> Regular mail exchanges | <input type="checkbox"/> Other: _____              |

11. About how often did you meet other teachers in your school to discuss ideas, share information or collaborate on school projects?

- |   |   |
|---|---|
| <input type="checkbox"/> Rarely or never        | <input type="checkbox"/> Once to several times a week |
| <input type="checkbox"/> A few times each month | <input type="checkbox"/> A few times each semester    |

12. In what areas did you collaborate with the Learning Circle participants? (Check [✓] all that apply)

- a. Selecting/developing the topic to be studied
- b. Developing objectives for the students' project
- c. Choosing instructional methods
- d. Selecting/developing student learning materials
- e. Evaluating/ monitoring students' progress
- f. Other \_\_\_\_\_

13. In what areas did you collaborate with your specific partner in the Learning Circle?

14. In general, how did you feel about each of the four New York State/Moscow School Telecommunications Project activities listed below? For each activity, indicate your feelings by placing an x on one of the five lines between each pair of words.

**1. Use of Technology in the Classroom**

Confused	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	Knowledgeable
Excited	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	Bored
Uncertain	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	Confident
Tense	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	Relaxed
Productive	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	Frustrated
Successful	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	Unsuccessful

## 2. Student Exchange Visits

Confused	1	2	3	4	5	Knowledgeable
Excited	1	2	3	4	5	Bored
Uncertain	1	2	3	4	5	Confident
Tense	1	2	3	4	5	Relaxed
Productive	1	2	3	4	5	Frustrated
Successful	1	2	3	4	5	Unsuccessful

## 3. Student Problem Solving Projects

Confused	1	2	3	4	5	Knowledgeable
Excited	1	2	3	4	5	Bored
Uncertain	1	2	3	4	5	Confident
Tense	1	2	3	4	5	Relaxed
Productive	1	2	3	4	5	Frustrated
Successful	1	2	3	4	5	Unsuccessful

## 4. Collaboration with Soviet Colleagues

Confused	1	2	3	4	5	Knowledgeable
Excited	1	2	3	4	5	Bored
Uncertain	1	2	3	4	5	Confident
Tense	1	2	3	4	5	Relaxed
Productive	1	2	3	4	5	Frustrated
Successful	1	2	3	4	5	Unsuccessful

15. Which of the following have been the three most important student benefits of the New York State/Moscow Schools Telecommunications Project? (Check [✓] top three only)
- a. Improved student academic skills
  - b. Improved student foreign language skills
  - c. Increased enrollment in foreign language classes
  - d. Increased use of technology in the classroom
  - e. Integrating technology within the curriculum
  - f. Increased cooperative learning among students in their own class and with students from another culture
  - g. Improved student cultural awareness for the betterment of society and the world at large
  - h. Improved student research skills
  - i. Increased student knowledge of international events

16. What factors, if any, do you feel have restricted or hindered the successful implementation of the New York State/Moscow Schools Telecommunications Project?

- a. Insufficient staff training
- b. Inadequate curriculum materials
- c. Time/scheduling problems
- d. Insufficient time for project planning with Soviet colleague
- e. Difficulties sending and receiving information via E-mail
- f. Difficulties communicating in another language
- g. Lack of student interest
- h. Lack of administrative support
- i. Insufficient resources
- j. Work overload
- k. None
- l. Other (please describe): \_\_\_\_\_

17. How have you personally been affected by the New York State/Moscow Schools Telecommunications Project? Please check  the one box that best completes each statement.

	Improved	Remained the Same	Worsened
a. My morale has			
b. My attitude towards cooperative student learning projects has			
c. My repertoire of teaching strategies has			
d. My use of technology in the classroom has			
e. My professional development has			
f. My understanding of international events has			
g. My involvement with causes for the betterment of society and world peace has			

18. Please indicate your level of satisfaction with each of the following aspects of the New York State/Moscow Schools Telecommunications Project.

	Very Satisfied	Somewhat Satisfied	Not At All Satisfied
a. The New York State/Moscow Schools Telecommunications Project, in general			
b. District commitment to the project			
c. Amount of training you received			
d. Amount of planning time allotted			
e. Project impact on student attitudes towards other cultures			
f. Project impact on student cooperation with others			
g. Project impact on student foreign language skills			
h. "Performance" of the technology			
i. Communication with Soviet colleagues			

19. What factors contributed to the success of the New York State/Moscow Schools Telecommunications Project?
20. What changes, if any, would you suggest in the New York State/Moscow Schools Telecommunications Project?
21. Were there any students, or groups of students, who demonstrated a positive or negative change in attitude, behavior, or performance as a result of this program (for example, less able foreign language students who are now more motivated or proficient, or students becoming more proficient in research and technology skills)? If **Yes**, please describe briefly the changes including the initial behavior or performance noted.

**THANK YOU FOR YOUR COOPERATION!**

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**NEW YORK STATE/MOSCOW SCHOOLS  
TELECOMMUNICATIONS PROJECT**

**Student Survey**

*This is a survey about the New York State/Moscow Schools Telecommunications Project. Answer each item as best you can even though the choices may not express the exact way you see things. No one in your school will see your answers.*

1. What grade are you in?

Grades 6-8

Grades 11-12

Grades 9-10

Other \_\_\_\_\_

2. Are you:  Male or  Female

3. Are you currently enrolled in a Russian Foreign Language class?

Yes

No

Have taken Russian Language classes before

4. Did you participate in the New York State/Moscow Schools Telecommunications Project last year?  Yes  No

5. Have you ever gone to the Soviet Union on a student exchange visit as part of the New York State/Moscow Schools Telecommunications Project?  Yes  No

6. Has your school hosted the Soviet students on an exchange visit as part of the New York State/Moscow Schools Telecommunications Project?  Yes  No  Don't Know

7. About how often did you contact or work together with students in the Learning Circle during the project?

Once to several times a week

A few times each semester

A few times each month

Never

8. With whom did you communicate most often within the Learning Circle?

American students

About the same with American and Soviet students

Soviet students

9. How did you usually contact or work together with Soviet students during this project? Please check  all that apply.

By regular mail

By long distance phone calls

By E-mail

By exchange visit

By lumaphone conference

Other \_\_\_\_\_

I did not contact or work with Soviet students during this project.





14. Of all the experiences you had during the project, which one did you find to be the most beneficial to you? (Check [✓] **one only**.)

- a. E-mail
- b. Lumaphone conferences
- c. Exchange visit
- d. Learning more about topic your group studied
- e. Working on the student project(s) with my classmates
- f. Practicing the Russian language with the Soviets by mail, phone, or during the exchange visit
- g. Working with the Soviet students on the project
- h. Making friends with the Soviet students

15. Overall, how much did your experiences in the New York State/Moscow Schools Telecommunications Project help you to:

	A lot	A little	Not much
a. appreciate other cultures?			
b. get along better with others?			
c. make new friends with Soviet students?			
d. use computers more often?			
e. discuss world issues with friends and adults?			
f. improve your foreign language skills?			
g. improve your research skills?			
h. improve your academic skills?			
i. increase your knowledge of international events?			
j. develop a closer relationship with your teacher?			

16. What did you like best about the New York State/Moscow Schools Telecommunications Project?

17. What did you like least about the New York State/Moscow Schools Telecommunications Project?

18. What changes, if any, would you like to see in the New York State/Moscow Schools Telecommunications Project so that it could help you or other students more?

School: \_\_\_\_\_

"Project completed" - blue copies

## STUDENT LOG

**Directions:** We are interested in finding out about some of the things you do in school and outside of school. Please read all items first and then complete this log as carefully as possible. Your teacher will give you specific instructions about when and how to do so. If you are not sure about a particular item, please ask your teacher for help.

Date of Log Completion:    \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
  day    mo.    yr.

Day of Week:         Monday        Tuesday        Wednesday  
                           Thursday       Friday

Are you a:            male or a        female?

What grade are you in?    6th        7th        8th        9th  
                                   10th       11th       12th

---

A. Today, in school, I: (Check  all that apply.)

- a. used a computer
- b. worked cooperatively with another student(s)
- c. worked cooperatively with a student from another country/culture
- d. worked on a school project having to do with social and/or political issues (including issues of concern to this country or other countries)
- e. practiced speaking a foreign language outside of class
- f. had a discussion about a specific international event
- g. had a discussion about social and/or political issues
- h. had a discussion about cultures (for example, foods, clothing, music, sports in other countries)
- i. had a discussion about how people in this world could live in peace
- j. attended an event or lecture where peace was discussed
- k. read a teacher-assigned article or book about another country or culture
- l. read an article or book about another country or culture that I selected myself
- m. read a book by an author from another country

**Over Please**

B. What three things did you like best about school today?

---

---

---

C. Yesterday, after school (or at home), I: (Check [✓] all that apply.) [NOTE: do not include homework assignments]

- a. read the newspaper for \_\_\_\_\_ minutes
- b. read a news magazine such as **Time** or **Newsweek**
- c. watched the national news on television
- d. watched a television show about social and/or political issues (including issues of concern to this country or other countries)
- e. clipped out an article about social and/or political issues involving this country or other countries
- f. practiced speaking a foreign language with my family or friends
- g. had a discussion about a specific international event
- h. had a discussion about social and/or political issues
- i. had a discussion about cultures
- j. had a discussion about how people in this world could live in peace
- k. attended an event or lecture where peace was discussed
- l. read a book about another country
- m. read a book by an author from another country
- n. went to a restaurant that serves food from another country or culture
- o. brought home a friend from another country or culture
- p. spent time with a friend from another country or culture
- q. wrote a letter and/or telephoned someone who lives in another country
- r. went to a museum
- s. went to the library
- t. used a computer
- u. performed community volunteer work with people who have special needs (for example, the elderly or homeless)

D. Please describe anything that you did yesterday that supported a cause (e.g., environmental causes, social causes, etc.)

## Teacher Log

**Directions:** We are interested in finding out about some of the activities in your classroom and outside the classroom. Please read all items first and then complete this log as carefully as possible.

Date of Log Completion: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Day of Week:         Monday             Tuesday             Wednesday  
                          Thursday         Friday               Sat/Sun

Content class/grade level of the Project: \_\_\_\_\_

---

A. Check all activities in which you were directly involved during today's school session. (Check  all that apply.)

- a. used a computer in conducting lessons
- b. used another form of technology (e.g. lumaphone, videodiscs, etc.) in conducting a lesson
- c. collaborated in planning a lesson with another teacher in this school
- d. collaborated in planning a lesson with a teacher from another country or culture
- e. jointly taught a lesson with another teacher in this school
- f. jointly taught a lesson with a teacher from another country/culture via telecommunications
- g. designed or conducted a lesson having to do with social and/or political issues (including issues of concern to this country or other countries)
- h. designed or conducted a lesson which involved problem solving and/or research skills
- i. designed or conducted a lesson which facilitated understanding of cultures/cultural diversity
- j. shared my experience on the New York/Moscow Project with colleagues
- k. met with a student outside of class to continue working on the New York/Moscow Project
- l. had a discussion about world peace
- m. attended an event or lecture where peace was discussed
- n. read a professional article about another culture or cultural diversity

B. What three things were most satisfying about your work today?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**Over Please**

C. Please check all the activities which occurred yesterday after dismissal time in school or at home. (Check [✓] all that apply.)

- a. read a professional article or book about another culture or multi-cultural education
- b. attended a course or training program on the use of technology/telecommunications in education
- c. attended a course or training program on a foreign language or understanding different cultures
- d. attended a course or training program about interdisciplinary teaching
- e. watched a television show about social and/or political issues involving this country or other countries
- f. discussed a specific international event
- g. discussed social and/or political issues
- h. discussed world peace
- i. gave a lecture or conducted training on the use of technology/telecommunications in the classroom
- j. gave a lecture or conducted training interdisciplinary curriculum
- k. wrote a letter and/or telephoned someone who lives in another country to explore future school partnerships
- l. went to a museum or library
- m. used a computer
- n. performed community volunteer work with people who have special needs (for example, elderly or homeless)

D. Please describe anything else that you did yesterday that relates to the New York/Moscow Project:

**THANK YOU FOR COMPLETING THIS LOG**