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ABSTRACT

The implicit power of modern communications technologies to improve citizenship education is explored in this paper. The relationship between the use of educational technology and the effectiveness of social studies instruction are only beginning to be studied, and these inquiries have been focused more upon the "harder" science dimensions of the social studies, geography and economics, than on the "softer" areas of civic competency or citizenship education. After a brief review of the literature, the outcomes of projects designed to help teachers make better use of technology in social studies instruction are described. These projects, part of the Technology in the Curriculum (TIC) Program dealing with mathematics, science, and language arts, in addition to history-social science, were funded to help teachers use technology to enhance and extend their curriculum programs and to redirect the emphasis of the state's Teacher Education and Computer Centers (TECCs) from a concentration upon "computer literacy" for everyone toward the use of technology to improve instruction. (BZ)

TECHNOLOGY IN A CURRICULUM FOR CITIZENSHIP

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TECHNOLOGY IN A CURRICULUM FOR CITIZENSHIP

Overview

We began a recent report prepared for the California State Department of Education with an assertion: "Leaders of the current educational reform movement have great expectations about the power of technology to improve the effectiveness of instruction" (Rockman, Cradler, & Eckenrod, 1986). The linkage between the use of educational technology, such as computer assisted instruction, and improved teaching effectiveness is generally well established in mathematics and science; research has been focused upon these relationships for more than a decade. We know, however, than many more math and science teachers use computers in classroom instruction than do social studies teachers. Relationships between the use of educational technology and the effectiveness of social studies instruction are only beginning to be studied and these inquiries have been focused more upon the "harder" science dimensions of the social studies, geography and economics, than on the "softer" areas of civic competency or citizenship education.

In this paper we explore the implicit power of modern communications technologies to improve citizenship education; it should be clear to even the casual observer that the schools are not waiting until validated research evidence is in to implement microcomputer and video technology. After a brief review of the literature we will describe the outcomes of a project designed to help teachers make better use of technology in social studies instruction. The Technology in the Curriculum (TIC) projects,

funded by the California State Department of Education ([CSDE] 1986), were not established to study how educational technology influences teaching effectiveness. The TIC projects (dealing with mathematics, science, and language arts, in addition to history-social science) were funded to help teachers use technology to enhance and extend their curriculum programs. The TIC program was a tacit effort to redirect the emphasis of the state's Teacher Education and Computer Centers (TECCs) from concentration upon "computer literacy" for everyone toward the use of technology to improve instruction. In a real sense we saw the TIC project for history-social science (HSS) as an opportunity to increase the awareness of social studies educators about already existing resources, a first-step toward increasing the level of use of technology programs by social studies teachers to a point where researchers might have enough classrooms to look at the effects of technology use on teaching effectiveness.

Most of the professional literature reviewed for this paper deals with the use of microcomputrers in the social studies and, as indicated above, we are probably some years away from demonstrating how that technology can improve the effectiveness of citizenship education. We know more about the effects of television on children's attitudes and skill development (Agency for Instructional Television, 1982) and can point to specific events in recent history to demonstrate the power of the medium on civic behavior.

Who can forget how Americans were invited each evening to witness the great constitutional struggle in the Senate Watergate and House Impeachment hearings in 1973 and 1974? Can we explain why a steady decline in voter turnout was reversed in the presidential election of 1976 without discussing the impact of those powerful nightly "connections" with history in the making? Why would a teacher today choose <u>not</u> to share video footage of the hearings with students who were four or five years old when the events took

place? How can a textbook account of the hearings give a student any real sense of the gut-wrenching emotion and intense political battling that characterized those days?

It should be obvious that we too have great expectations about the power of technology to improve social studies education, to bring history alive and stimulate serious thinking about citizenship. We hope this report will encourage our colleagues to see if and how it may be so.

Technology and the Social Studies: The Awakening

When we submitted the TIC/HSS project proposal from the Far West Laboratory for Educational Research and Development early in 1985, we cited the results of a search of the ERIC database that revealed only 12 documents combining the major search descriptor social studies with computer programs and 13 with educational television. We noted:

> Although the educational reform movement in California is even-handed in its approach to improving instruction in all curriculum areas, the inequity of concern [about the reform of the social studies curriculum in comparison with science and mathematics] nationally -- coupled with a persistently noninnovative population of social studies teachers (Morrissett, 1982) -- seem to keep history-social science education "on the verge" of the educational technology revolution.

Our search of the ERIC system a year-and-a-half later, as can be seen in the reference section, revealed a substantial increase in the volume of the professional literature dealing with technology and the social studies. The overwhelming majority of the citations, however, are r ctictioneer-oriented articles; our review of the last five years of Tr.. y and Research in Social Education and recent reviews of research (Cornbleth, 1986; Stanley, 1985) revealed nothing directly related to educational technology.

While the National Council for the Social Studies had published one of its How-To-Do-It Series on Computers in the Social Studies Classroom, by Richard Diem in 1981, there were no articles dealing with computers in

Social Education until March of 1983 when Mollie Cohen (1983b) summarized the sessions on microcomputers at the 1982 annual convention. In its premier issue, in September of 1981, Electronic Learning had published a review of the computer simulation Oregon Trail developed by the Minnesota Educational Computing Consortium (MECC).

Although Social Education and The Social Studies have begun to devote more attention to computer applications to social studies they are pressed to keep up with the technologically-oriented journals such as Electronic Learning and Educational Technology.* At present, teachers can get more information about new computer software for social studies instruction in the technological journals than they can in the national periodicals devoted to social education.

The first really substantial venture into technology made by the editors of Social Education occured in the May 1983 issue with a special section on Technology and the Social Studies: Issues and Responsibilities, edited by Richard Diem. The guest editor noted that the "articles in this

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* For Social Education see Berg, 1983; Blaga, 1983; Cohen, 1983a, 1984; Diem, 1983, 1985; Furlong, 1983, 1984a, 1984b, 1985a, 1985b; Glenn, 1983; Hatcher & Chiodo, 1984; Hodges, 1985; Hunter, 1983a; Marsh, 1986; Miller, 1985; Martorella, 1983; Morrissett, 1984; Rawitsch, 1983; Rose, 1984, 1986; Rose, Brandhorst, Glenn, Hodges, & White, 1984; Searles, 1983; Senn, 1983a; Traberman, 1984; White, 1983, 1985; and Wojtan, 1984.

The Social Studies has published Cacha, 1985; Cousins, 1984; Galvin, 1985; Kite, 1985; Litchfield, 1983; Rothman, 1986; Schug & Kepner, 1984; and Weible & McMahon, 1982.

Electronic Learning articles on the social studies include Baraloto, 1985; Big Sift, the, 1985; Bockman, Rausch, & Anshell, 1982; Charischak, 1984; Fougerat, 1985; Ingber, 1986; Lodish, 1985a, 1985b; Minnesota Department of Education, 1984; Martorella, 1984a, 1984b, 1984c; Osborn, 1981; Rosenzweig, 1985, 1986; Software Index, 1986; Software Previews, 1985a, 1985b, 1986a, 1986b, 1986c; Solomon, 1986; White, 1984; and White & Glenn, 1984.

Educational Technology has published Glenn, 1984; Glenn & Kehrberg, 1981; Glenn, Kozen, & Pollak, 1984; Gordon, 1982; Levinson, 1982; Saltinski, 1981; and Stoloff, 1983.

section can begin to scratch the surface. . . [and] generate both interest and dialogue" (Diem, 1983, p. 313). In the set of articles Berg (1983) analyzed the forces in support of and opposed to the introduction of computer technology in social studies classes. Senn (1983a) provided a very practical set of checklists of considerations for the implementation of technology and Rawitsch (1983) outlined steps for evaluating computer software. An overview of the range of computer applications for social studies instruction, particularly the utility of databases, was described by Hunter (1983a). Martorella (1983) and Glenn (1983) wrote about the capabilities of interactive video and videodisc technologies for enhancing learning and instruction. (The journal of the California Council for the Social Studies, the Social Studies Review, however, provides more extensive reviews of microcomputer courseware, by Denny Daetz [1985a, 1985b, 1985c, & 1984], the developer of the microcomputer simulation SIMPOLICON, for social studies teachers than does its parent organization, the NCSS.)

The special section of Social Education continued with an examination of questions about how information technologies may affect social studies instruction by John Searles (1983). One article in the special section, by Charles White (1983), employed criteria provided by the Mershon Center's Citizenship Development Program to select software with potential for enriching citizenship education.

Technology and Social Education: Has the Bandwagon Passed?

Charles White's (1983) bibliography* of citizenship education software in the May 1983 issue of Social Education was the article most specifically relevant to the theme of this year's Social Science Education Consortium

* Hodges (1982), though, had prepared a more comprehensive but unpublished set of software descriptions several months before, a bibliography used extensively by Chapin (1984) in her Social Studies Review article.

annual meeting. The Mershon Center had specified that the software in the review had to meet three criteria (p. 338):

1. Content relevance, with a focus on junior and senior high school civics, American government, world geography and global issues/problems.

2. Variety of instructional stragegies, from drill and practice to complex simulations.

3. Exemplary use of computer for instruction, even if outside the traditional social studies content.

White's "selective list" of software, a "snapshot of continuing development," described 15 software programs for social studies. He decried the shortage of high-quality simulations (such as the "classic" Oregon*) and noted a glut of drill and practice software (such as Continent, Country, and Meet the Presidents).

The Software Review column in the February 1984 Social Education (Furlong, 1984b) provided a one page description of the simulation programs President Elect and Electoral College and Primary Fight as among the "little election-related software currently available." The Social Education reviewer found the President Elect program to be "well-constructed" and "highly motivating" but regarded the latter programs as less useful. The column was subsequently renamed Computer Courseware, through March of 1985 (Furlong, 1985a), and seems to have disappeared from the journal entirely; software reviews now appear in the feature section on Instructional Media (Rose, 1986).

In contrast, the September 1984 issue of Electronic Learning devoted nearly seven pages to descriptions of election-related software. "This fall was made for social studies classes," wrote the special section authors Charles White and Allen Glenn (1984, pg. 54), exhorting teachers to see

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* Original version reviewed by Osborn, (1981); revised version, The Oregon Trail, reviewed by Cacha (1986) and defended by Bouchard (1986).

the presidential election as an event that was turning "the entire country into one enormous lab experiment for students to examine, manipulate, and think about" by making use of microcomputer courseware and application programs. Peter Martorella (1984a, 1984b, & 1984c) provided reviews of spreadsheets, "home made" data bases, and five election simulations.

In the midst of the rise and apparent decline of software reviews as a continuing feature in Social Education, the journal published the Social Studies Microcomputer Courseware Evaluation Guidelines (Rose, Brandhorst, Glenn, Hodges, & White, 1984). This document provides a set of criteria prepared by the NCSS Ad Hoc Committee on Computer Courseware Evaluation Guidelines drawn from the "NCSS Social Studies Curriculum Guidelines," "Curriculum Guidelines for Multiethnic Education," and "Essentials of the Social Studies." The authors suggest that the NCSS Guidelines be used to "determine whether or not a particular set of materials is appropriate for use in the social studies classroom" before confronting other technical and instructional issues using other published evaluation instruments. The Guidelines are organized around three areas -- Knowledge, Skills, and Values -- with checklists to help evaluators assess the extent of emphasis.

In reviewing the literature of the past few years we began to develop a sense that interest -- at least as it is expressed by space in the social studies journals devoted to "high-tech" instructional aids such as computers -- in technology to support social studies instruction may have reached a peak and is on the decline. This may also reflect, of course, a low-level of interest in technology on the part of those who chronicle what they believe to be progressive trends in the field.

(There has, however, been a recent surge of trade books on the use of microcomputers for social studies instruction; see Braun, 1986; Friel, Landengurg, & Roberts, 1986; and Rooze & Northup, 1986.)

What Is the Situation?

We mentioned earlier how "noninnovative" social studies teachers (Morrissett, 1982) seemed to be keeping the field "on the verge" of the technological revolution. Carole Hahn (1985) inquired about the "effect the 'computer craze' was having on social studies" and found out that, in 31 states, "computers. . . were used only slightly and another four reported moderate use -- and only to play simulation games" (pg. 222).

The hope that Irving Morrissett (1984) had expressed about the potential of computers to provide a catalyst "to shake [social] education out of its rut" seems rather remote if we assess the treatment of technology in the professional literature. The potential of educational technology to contribute to citizenship education, the improvement of which is urged so eloquently by such eminent scholars as R. Freeman Butts (1980, 1983a, & 1983b), Carlos Cortes (1983), Richard Gross (1985), and James Shaver (1981), would appear even farther away.

In undertaking the work of the Technology in Curriculum (TIC) project, we had responded, not to a clarion call in Social Education, but to one of the more pervasive forces in bringing about educational change: a mandate from the state department of education. The state of California was able and willing to support a project designed to reconcile some of the problems associated with the use of computers and instructional television (ITV) in the schools. The need to match technology programs to specific curriculum objectives, noted by Senn (1983b), Cohen (1983a), and others, was addressed in this large scale effort. We also had to face a rather paradoxical situation; software and ITV developers have developed quite a lot of good material for the social studies but few teachers are using it. We were to develop means to stimulate the "consumption" of the available technology as part of the broader effort to increase technological literacy in the state.

The TIC Program

The educational reform movement in California is based upon what the State Superintendent of Public Instruction, Bill Honig (1985), refers to as an "essentialist" philosophy, a view that "holds that many of our students can profit by a traditional academic curriculum, whether or not they are college-bound" (pg. 675). Reform initiatives in the state include a wide variety of programs to upgrade the quality of academic preparation that is provided for students in the public schools. Honig cites three reasons for the push for better academic programs, two of which are strongly related to the goals of citizenship education.

> First, the job market is changing rapidly. If we are to stay competitive, our economy needs more young people with sophisticated educational backgrounds. . . .
>
> The second reason. . . is that leaders in this country are rediscovering the idea that the survival of our democracy depends on a literate citizenry and requries that we do a better job of teaching civic values. We need to connect more of our students to our history, to our culture, and to those ideals that bind us together as a society. Schools are key institutions for transmitting the critical thinking skills requried for democratic government, the knowledge of and allegence to our national beliefs, and such common cultural values as honesty, integrity, tolerance, fairness, magnanimity, and self-discipline. . . .
>
> The third. . . reason. . . is that we can surely be more successful in opening vistas for our young people if we give more of them a broad liberal education. . . To shield average students from the wisdom and power of our heritage effectively keeps them class-bound and vitiates the potential power of our schools to develop individual talents, and to empower students to participate in our society. (Pg. 676)

The TIC Program projects were designed to promote the use of computer and instructional technology in support of instruction, <u>improved</u> instruction to be sure, by providing information to teachers about programs that help in delivering curriculum content and foster thinking skills. The staff of the TIC project for history-social science (TIC/HSS) found it necessary to develop a working model of curriculum scope and sequence, a

document reflecting consensus about the current and emerging pattern of course offerings in the state, to which we could "match" the technology programs. We drew upon a wide range of state* and national publications (National Council for the Social Studies [NCSS], 1984) and combined information from those resources with professional knowledge about other educational reform initiatives underway in the state and defined objectives involving (1) knowledge, (2) skills, (3) values, and (4) social participation (Rockman & Eckenrod, 1986, pp. 16-35), the goals of history-social science education in California (Appendix A contains examples):

> **Knowledge**; the content, including history, the social sciences, and the humanities, suggested for grade level settings in the History-Social Science Framework (grades K-8) and the "required" courses of the Model Curriculum Standards (grades 9-12)
>
> **Skills**; Study or Basic Skills, Intellectual or Critical/Creative Thinking Skills, and Interpersonal or Social Participation Skills (critical thinking skill continuum derived from the California Assessment Program)
>
> **Values**; "Unum," promoting cohesive and unifying elements in a democratic community, and "Pluribus," promoting pluralistic and individualistic elements (with proper credit to Butts, 1980)
>
> **Social Participation**; class, school, and community activities to develop civic competency (listed in the HSS Resource Guide as Social Participation Skills)

The TIC resource materials, however, required more than the simple matching of technology programs to specific curriculum objectives; we had to specify how a computer courseware program or an ITV series was better -- or more appropriate -- than traditional instructional techniques for achieving any given curriculum objective. In defining the appropriate uses of technology in the social studies curriculum (see Figure 1 on page 12) we drew upon the ideas developed by Allen Glenn and Don Rawitsch (1984) and

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* History-Social Science Framework for California Public Schools; Model Curriculum Standards, Grades Nine Through Twelve; and California Assessment Program, History-Social Science: Grade Eight.

Beverly Hunter (1983a & 1985) as well as the collective experience of the project staff, advisory panel members, and the 42 teacher-reviewers who worked through more than 280 software and ITV programs.

The criteria for the review of the technology materials were developed from (1) state department of education program guidelines, (2) published sources (Rose et al., 1984; Glenn & Rawitsch, 1984; Rawitsch, 1983; Senn, 1983a; among others), and (3) the specialized knowledge of our staff and advisors in ITV and computer education. Essentially, the reviewers, working in teams of three, looked at the technology programs and made judgments about whether or not the program might be helpful in achieving specific content objectives from the scope and sequence.

The reviewers did not try the technology programs with students to see if, in fact, a program actually contributed to learning or skill development. When a program had been identified as potentially effective for contributing to the attainment of knowledge or content objectives the reviewers made judgments about the skill and value objectives that might be enhanced by the program and then recorded pertinent information about it for the Resource Guide (see Appendix B for sample entries.)

What We Produced

Each of the four TIC projects prepared a Resource Guide and provided input for a relational data base, DataRelator, that enabled users to find software or ITV programs somewhat more quickly than by thumbing trough the guides; the History-Social Science guide is 351 pages long and contains two- and three-page descriptions of 124 programs. A matrix, the Curriculum Match (see Appendix B), permits the identification of technology programs identified as appropriate for each grade level. The DataRelator, however,

(Text continues on page 13.)

Figure 1. Appropriate Uses of Technology in the

History-Social Science Curriculum

Microcomputer (M/C) technology and instructional television (ITV) can help teachers improve instructional effectiveness by making use of inherent capabilities for the systematic organization of information, variation and repetition of stimuli, and variable rates of presentation. Uses include:

- **A method for delivering curriculum content:**

M/C - Tutorials, drills, and simulations enable students to acquire information individually or in groups	ITV - Film footage or dramatic recreations of events, people, and places provide students with at least vicarious experience with the "long-ago" and "far-away"

- **A tool for retrieving and analyzing information:**

M/C - Data may be collected by students, obtained from databases designed for school use, or be drawn via telecommunications from commercial sources	ITV - Students can videotape local events, make fair use of commercial broadcast television programming or use ITV broadcasts or videotapes as sources of data about other cultures and nations in current or historical perspectives

- **An object of study:**

M/C - The use of computer technology is much more concrete to students who have personal experience in the use of computers in a variety of applications	ITV - Television is a powerful global medium of communications with significant potential for affecting the social, political, and economic behavior of people worldwide

- **A tool for developing critical thinking skills:**

M/C - Active involvement in data collection and analyses, hypothetical reasoning, and problem solving are the essence of the cognitive activity related to improvements in critical thinking abilities	ITV - Video provides vivid images that enable students to share in problem solving activities and reflect upon the intellectual processes that they use in developing and testing hypotheses

- **A teaching tool for classroom management and learning facilitation:**

M/C - Teachers can manage a wide range of routine classroom record keeping and information management chores more efficiently	ITV - Teachers can capitalize upon the built-in motivation and personal relevance that video holds for their students

enables the user to identify software and ITV programs that have been matched with specific curriculum topics as well as the grade level settings or courses (Appendix C contains examples of the DataRelator printouts).

The set of four resource guides, the DataRelator disks, and a package of selected demonstration software (Appendix D)* was distributed to the approximately 7,000 school in California through the county offices of education. TIC project personnel provided training in the use of the materials to personnel from the network of 15 Teacher Education and Computer (TEC) Centers. The TECCs are now expected to provide awareness and implementation training to school representatives throughout the state.

In addition, summer institutes will be providing intensive training in the use of technology, including the TIC resources, for 200 elementary and 400 secondary teachers. It is expected that the institute participants will influence their schools, districts, and regions to make better use of technology in increasing the effectiveness of instruction.

What We Learned

Our teacher-reviewers had some experience in using computer software but very little with ITV. As the summer review workshops went on, however, virtually all of them developed proficiency in using both technologies and left looking to introduce them in their school settings.

The reviewers examined 221 software programs and 60 ITV series. The evaluations of the programs were summarized on a five-point scale based on technical review standards. The State Department of Education decided, however, that only programs receiving the top two ratings, exemplary and desirable, were to be included in the guide.

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* Commercial software samples of exemplary programs from all four curriculum areas.

Table 1. Software Ratings by Grade Level

GRADE LEVEL, SETTING, COURSE	E	D	A	W	U
K.0 Myself & Others in My World		2	1		
1.0 People at Home and at School		3	3	1	
2.0 People as Members of Groups		5		1	1
3.0 People as Members of Communities	1	9	4	1	3
4.0 People of a Region: California	2	11	7	6	3
5.0 The People of a Nation	6	31	33	25	6
6.0 Our World: Its Diverse Peoples	7	23	23	13	10
7.0 The Changing World	6	15	18	9	5
8.0 The American Experience	6	26	25	22	2
10.0 World History Culture/Group	7	15	12	4	9
11.0 U.S. History & Geography	6	23	21	24	3
12.0 American Govt., Civics & Economics	7	20	13	11	2
	Recommended		Not Recommended		

E = Excellent; D = Desirable; A = Acceptable; W = Weak; U = Unacceptable

Only eight percent of the software programs evaluated were considered exemplary and thirty percent were rated as desirable. Note that the rating of Acceptable was not considered adequate for inclusion in the Resource Guide. Thus, less than 40 percent of the computer programs reviewed were recommended for use by social studies teachers.

Table 2 provides information on how the reviewers regarded different types of software programs. We had anticipated that some types, such as drill and practice programs, might not fare as well in comparison with the better simulations when the reviewers applied criteria of appropriateness.

Table 2. Type of Computer Program by Rating Category*

PROGRAM TYPE	E	D	A	W	U	SUM
Demonstration		2	3	1	1	7
Drill & Practice	4	32	26	20	6	88
Simulation	10	23	17	23	5	78
Game	9	21	14	9	1	54
Tutorial	5	16	11	15	2	49
Other	3	6	5	9	3	26
	Recommended		Not recommended			

* Several programs were classified as more than one type

The proportions of drill-and-practice programs and simulations that were approved for inclusion in the Resource Guide by the reviewers, 40.9 and 42.3 percent respectively, indicated that the teachers found some merit in both types of programs. Only 12.5 percent of the drill-and-practice programs, though, were rated as exemplary while over 30 percent of the simulations received that classification.

In comparison with the computer software programs, the reviewers found a substantially higher proportion of the instructional television programming worthy of inclusion in the Resource Guide. Twenty percent of the ITV series were rated as exemplary and another 48 percent were considered desirable. Just under one-third, then, did not meet the criteria for being

described in the TIC resource materials. (Note that the rating category of weak was not used in the ITV evaluation.) Table 3 provides data on the ITV series reviewed by the TIC/HSS reviewers.

Table 3. ITV Series Ratings by Grade Level

GRADE LEVEL, SETTING, COURSE	E	D	A	U
K.0 Myself & Others in My World		4		
1.0 People at Home and at School		4	3	
2.0 People as Members of Groups	2	7	5	
3.0 People as Members of Communities	1	7	6	
4.0 People of a Region: California	3	4		
5.0 The People of a Nation	4	13	5	
6.0 Our World: Its Diverse Peoples	6	16	2	1
7.0 The Changing World	5	9	1	1
8.0 The American Experience	5	8	2	
10.0 World History Culture/Group	7	11		2
11.0 U.S. History & Geography	7	9		
12.0 American Govt. Civics & Econ.	4	9		
	Recommended		Not Recommended	

The final product of the history-social science TIC project was a paper (Rockman, Cradler, & Eckenrod, 1986) that discussed the needs for improving the use of technology in the history-social science curriculum.

Technology and the Social Studies: Futures

The history-social science TIC project made a series of recommendations for the creation of technology materials to support the state's curriculum reform initiatives. These recommendations have implications not only for California, but for all social studies professionals as well, because the state is now encouraging the production of high quality software to meet the needs of the contemporary curriculum. The problems with low-levels of technology use by teachers, the lack of appropriate software for many areas of the curriculum, and the emerging needs of students led us to propose that the State Department stimulate the development of new materials on:

> **World perspectives** to create an informed citizenry aware of the political, social, and economic issues of the world. The development of global civic competency can be nurtured by good software and television programming.
>
> **Emigration, immigration, and migration,** to create links with the heritage and cultural diversity of contemporary minorities. We need, furthermore, to emphasize the experience of living in a democratic society for those from dissimilar cultural and political backgrounds.
>
> **Data-based problem solving** to shape inquiry in social studies classrooms -- gathering, organizing, and analyzing information -- to permit students to experience problem solving as historians and social scientists.

Past efforts at teaching social science process skills have had only limited success; contemporary technologies provide us with another chance to enlarge the world vision, cultural empathy, and improve problem solving skills of children and adolescents.

The TIC projects focused upon building awareness about <u>available</u> technology materials; there are, however, several other technological developments underway that have potential for contributing to social studies and citizenship education. Technology proponents have been probing the potential of the social studies to a much greater degree than social studies educators have begun exploring technology. As mentioned earlier,

the developers of technology have already begun to develop the classroom materials needed to improve the quality -- if not the effectiveness -- of citizenship education.

Data bases are being created by several companies, increasingly in formats that are easy for teachers and students to use in social studies classes. These computer programs can change both the manner in which citizenship education is conducted and the content considered. As data bases become available to the classroom, and as students learn to work with such tools, the range of "if-then" questions about historic or current data can be expanded. Students can explore the relationships among social behavior and dozens of demographic, political, or economic factors; indeed, they can manipulate complex data more readily than could many social scientists twenty years ago.

The Electronic Learning Software Index (1986) listed 21 social studies programs released between September 1985 and May of 1986 (see Figure 2 on page 19) that had been reviewed in the journal. Five programs, featuring seven different data bases, enable students to create local area studies (Hometown); manipulate data on 168 countries (Countries of the World), 178 countries (One World Countries Database), or 100 countries (Scholastic PFS: World Geography, Culture, and Economic Data Bases); or compare U. S. Presidents (MECC DataQuest: The Presidents).

The simulation SIMPOLICON* allows students to explore the complex processes and problems of national economic development. The computer keeps track of student decisions about 24 economic concepts (ranging from Absolute Advantage to Depreciation to Scarcity), nine political concepts (Conflict Management to Political Spectrum), and ten social concepts (such

*Cross Cultural Software, 5385 Elrose Avenue, San Jose, CA 95124

as Achieved Status and Values). The program, a 1984 Learning Magazine Software Award Winner, puts students in the roles of economic-political experts responsible for allocating economic resources.

Figure 2. 1985-86 Software Releases

Countries and Capitals (Micro Learningware) 5:86:42
Apple II series (32K). $35; grades 7-12.
Shows map of continents and asks user to name countries and their capitals; keeps score

Countries of the World (Grolier) 5:86:43
Apple II series (64K). $44.95; lab pack of 6 for $99.95; grades 7-12.
An excellent, easy-to-use program with data base about 168 countries and well developed activities covering broad scope of categories.

CrossCountry U.S.A. (DidaTech Software) 10:85:54
Apple II series (64K). $39.95; lab pack and site license available; grades 5-12.
Fine simulation has students drive a truck from city to city making pickups and deliveries while learning about geography and goods.

Economics (Academic Hallmarks) 1:86:62
Apple II series (48K). $27; site licenses available, $200 to copy all software programs; grades 10-12.
Program just presents 400 questions on various aspects of economics and keeps score of answers.

Foreign Governments and the UN (SEI) 5:86:43
Apple II series (48K). IBM PC/PCjr (64K). Tandy 1000. Commodore 64. $35; classroom site licenses free; okay to multiple load; grades 7-12.
Quizzes on broad scope of topics about world governments and the UN in post-war period; options include file editing, analysis of responses.

Hometown: A Local Area Study (Active Learning Systems) 3:86:62
IBM PC/PCjr (64K). Apple II series (64K). Commodore 64. $148; grades 7-12.
A two-disk data base designed to aid the collection, storage, and analysis of information about students' hometowns.

Journey Into the Unknown (Focus Media) 2:86:58
Apple II series (48K). Commodore 64. $99; grades 5-9.
Students become 15th century explorers on a simulated voyage of discovery.

Market Place, The (DEE) 3:86:62
Apple II series (48K). IBM PC/PCjr (128K). $49.95; grades 9-12.
Designed to give students an excellent understanding of the economic concepts of supply and demand with data and graphs.

MECC DataQuest: The Presidents (MECC) 2:86:58
Apple II series (64K). $49; lab pack of 5 for $149; grades 4-12.
Excellent program to spark student interest in American presidents and data base use.

One World Countries Database (Active Learning Systems) 5:86:43
Apple II series (64K). IBM PC/PCjr (128K). Commodore 64. $148; $20 for additional data disks; grades 7-12.
Very good, comprehensive data bases on 178 countries used for answers to projects posed in printed activities.

Other Side, The (Tom Snyder Productions) 11:85:54
Apple II series (48K). IBM PC/PCjr (64K). $69.95; lab packs in development; grades 7-12.
Outstanding game of conflict resolution between superpowers helps analytical thinking and gives view of what winning entails.

Population Growth (Conduit) 1:86:57
Apple II series (48K). $50; lab pack of 5 for $100; grades 9-12.
With concepts and mathematical models to predict population growth, student can plot growth curves and generate graphs.

Power Grid (HRM) 9:85:79
Apple II series (48K). TRS-80 III/4. $59; lab pack of 10 for $177; site license available; multiple load okay; grade level 10-12.
Students run simulated power plants producing power as cheaply as possible.

Revolution and Constitution (Mindscape) 4:86:59
Apple II series (64K). $39.95; lab pack of 6 for $100; grades 5-8.
Students inspect locales of historical events, examining objects at location and interview witnesses, then try to name event.

Road Rally U.S.A. (Bantam) 9:85:79
Apple II series (64K) and IBM PC/PCjr (128K). $39.95; Commodore 64. $29.95; grades 5-8
Students use maps—on-screen and off—to drive on simulated trips from city to city using map reading, geography, and problem-solving skills.

Scholastic PFS: World Geography, Culture, and Economic Data Bases (Scholastic Software) 5:86:43
Apple II family (64K). $99.95; grades 7-12.
Students use the three data bases to answer questions in printed material. Geography data base covers 100 countries. Must be used with *Scholastic PFS: File*.

Tragedy of War: A Simulation, The (Focus Media) 4:86:58
Apple II series (48K). Commodore 64. $99; grades 8-12.
Tutorial teaches about battle conditions during World War I.

U.S. Atlas Action (DLM) 3:86:62
Apple II series (48K). $43; grades 4-12.
Drill-and-practice review of important geography facts about the nation, regions, and states.

Where in the World is Carmen Sandiego? (Broderbund) 10:85:54
Apple II series (64K). $39.95; grades 8-12.
Excellent introduction to world geography as students become detectives and pursue crime suspects by using *The World Almanac*.

Wizard of Wall Street (Synapse) 2:86:58
IBM PC/PCjr (128K). $44.95; grades 10-12.
A real-time stock market simulation in which students buy and sell stocks and options while considering trade variables.

Women in Africa of the Sub-Sahara (MicroEd) 9:85:83
Apple II series (48K). Commodore 64. $79.95; okay to multiple load; grades 10-12.
A review and test on material covered in accompanying text; for women's studies and some social studies courses.

Another interactive simulation, The Other Side, encourages students to develop perspectives on issues that prevent or encourage wars and the escalation of hostilities between nations. Where in the World is Carmen Sandiego challen· · students to employ global geographic information in solving a series of mysteries.

Students can create data bases themselves; they can explore relationships among demographic variables and voting behavior, social attitudes and beliefs, and the like. In so doing we can expect that, by developing skills for arriving at conclusions about citizenship issues, students will somehow become different learners from the ones we have taught in the past.

Teachers will have to change their styles to fit with the new kinds of student capabilities. They will have to be more tolerant of divergent answers -- especially those that can be supported by data. They will have to revise extensively or discard those yellowed lecture notes and become more probing, more inquisitive, more open to social inquiry and to the processes of social science. Teachers of teachers will also have to change the way they prepare teachers and reconsider the scope and sequence of teacher education programs.

In other ways, television technology can help us understand the global perspective so necessary to students in the world today. Global civic competencies can begin to develop in the early grades where ITV programs can provide portrayals of life in a variety of communities and permit children to discover the similarities among human societies worldwide. The power of video to help students overcome stereotypes of other peoples has already been demonstrated (Johnston & Ettema, 1982). ITV programs such as Across Cultures can instill a sense of understanding, appreciation, and tolerance for other by broadening the horizons of young watchers. Across Cultures was created in response to demands from sixth and seventh grade

teachers. The rich visual and aural material captures the imaginations of students and adds concreteness to the words of a textbook. The series has thirteen 15-minute programs about people and the way they live in three cultures; the Tarahumara Indians of Mexico, the Baoule of the Ivory Coast, and the Japanese. Seven common institutions are compared, including communications, the environment, family needs, and education.

The coming generation of educational technology media will feature the marriage of computer and video technology; interactive videodisc programs have already been developed (Glenn, 1983; Glenn et al., 1984) and have the potential for combining the best features of tutorial and inquiry approaches to instruction.

Implications for Teacher Education

We believe that there several factors that must be considered in the redesign of preservice and inservice teacher education programs if teachers are to be prepared to deal with the new technologies. Changes are needed (Fontana, 1982) in at least three areas:

Teachers' attitudes toward instructional uses of technology. Teachers need to recognize that computers, television, and increasingly interactive videodisk technologies are becoming central to education and training throughout the world -- especially the world in which today's students will work. Literacy now goes beyond reading print materials. Our students are receiving experience with computers in other subject areas; why not in the social studies? They are watching television, including news programs, and are aware of a larger society and a larger world. Both teachers and school administrators will need to develop more positive attitudes toward the use of media materials if they are to help students develop critical viewing and problem solving skills.

Teachers' willingness to adopt innovations. Social studies teachers are notorious for ignoring innovative curriculum changes (Berg, 1983). They seem to be uncomfortable with change. We have to identify ways to alleviate the anxiety associated with the new technologies and the changes in classroom structure that accompany them. Technology is another tool of the trade and will never be a replacement for teachers. (In fact, the new technologies require even more preparation effort by teachers!) But, the technologies empower teachers and students to process incredible amounts of information and develop more complex problem solving skills. Perhaps the California summer technology institutes will be a step in the direction of developing a cadre of teachers who can show "the way" to their colleagues.

Teachers' skill in using instructional technology. The use of new instructional technologies must be associated with the growing professionalism of the teaching field. Professional development and personal achievement go hand-in-hand, thus the development of capabilities to manage and control the new technologies must be part of both preservice and inservice education programs for teachers. Teachers prepared for the new technologies may end up as better teachers; instructors aware of effective techniques and methods for opening the classroom to social inquiry.

And for the Other 49 States...

Teachers must become aware of and have access to contemporary (and forthcoming) technology materials. Through projects such as those provided by the Technology in the Curriculum Program, more and more teachers will become aware of the best of computer and ITV materials. They should be encouraged and helped to explore and experiment with technology materials, to relate them to the tasks of the social studies classroom, and to adapt media materials to improve their citizenship education programs.

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APPENDIX A

Excerpts from TIC Scope and Sequence

History-Social Science Curriculum Scope and Sequence

The Technology in Curriculum Project for History-Social Science was awarded a grant by the California State Department of Education in May of 1985 to identify technology programming -- computer and instructional television (ITV) programs -- that are judged appropriate for different instructional situations. In order to accomplish this, the staff of the project consulted with a panel of experienced history-social science teachers and curriculum specialists to make a determination of what is presently being taught at each grade level in California schools. A conference to develop a working consensus of the history-social science curriculum scope and sequence was held at the Far West Laboratory on April 29 and 30, 1985. This document is the result of project staff analysis of the scope and sequence documents produced by the conference participants.

The curriculum scope and sequence outlined in the following pages is not intended for general distribution or use by educators in developing history-social science instructional programs. It was produced solely for use by project personnel in matching technology materials with appropriate curriculum situations, that is, with instructional topics at specific grade levels. The objective was to identify the most prevalent (current and emerging) pattern of history-social science instruction in kindergarten through grade twelve. The reviewers of the education technology programming used the curriculum topics from the scope and sequence to identify instructional applications of materials deemed appropriate. The materials identified by this process are listed in this resource guide and on the *DataRelator* disk for the history-social science curriculum.

Participants in the scope and sequence conference made use of a wide variety of curriculum resources in identifying what is commonly taught in history-social science classes. The materials consulted included state, county, and district courses of study as well as materials produced by the National and California Councils for the Social Studies and other professional groups. This document, synthesized from an extensive set of matrices produced by the conference participants, draws primarily on the following:

Publication	Scope and Sequence Use
History-Social Science Framework for California Public Schools (California State Department of Education)	Specific grade level recommendations for curriculum topics, grades K through 7; study or basic skills and interpersonal or social participation skills, K through 12
Model Curriculm Standards, Grade Nine Through Twelve (First Edition, California State Department of Education)	Specific curriculum topics for required course for grades 9 through 12
History-Social Science: Grade Eight, Rationale and Content (Draft, California Assessment Program)	Specific curriculum topics for grade 8 history-social science
Assessment of the Critical Thinking Skills in History-Social Science (California Assessment Program)	Continuum of critical thinking skills
Guidelines for Geographic Education: Elementary and Secondary Schools (Joint Committee on Geographic Education)	Specific geography skills recommended for students in grades K through 6
Curriculum Guide for History-Social Science Framework (Santa Clara County Office of Education)	Selected learning objectives for grades K through 7
Social Science Standards of Achievement (Oakland Unified School District)	Selected learning objectives for grades K through 6

Study or Basic Skills

Students need opportunities to develop and use study or basic skills. The skills include knowing how to:

- B.1 Acquire information through listening, observing, reading, and utilizing community resources
- B.2 Locate information in textbooks, encyclopedias, specialized dictionaries, almanacs, and other reference materials
- B.3 Compile, organize, and evaluate information presented in books, periodicals, and other media
- B.4 Extract and interpret information from maps, models, graphs, charts, tables, pictures, and cartoons
- B.5 Communicate orally and in writing

Interpersonal or Social Participation Skills

Students need opportunities to develop and use interpersonal, valuing, or social participation skills. The interpersonal, human relations, and group process skills with which the history-social science program in kindergarten through grade twelve is most concerned consist of the ability to:

- S.1 Feel for others; empathize with them; be sensitive to their needs, problems, and aspirations; see things as others see them; take the perspectives of others
- S.2 Understand multiple perspectives of others
- S.3 Examine one's own feelings, values, capabilities, and shortcomings with an eye on developing a healthy, mature, and realistic concept of self
- S.4 Recognize one's own biases and prejudices on historical and social phenomena
- S.5 See people as individuals rather than applying stereotypes to them or classifying them arbitrarily as members of particular groups
- S.6 Balance facts and feelings, the intellectual and the emotional
- S.7 Work effectively with others as members of groups
- S.8 Give and receive constructive criticism
- S.9 Accept responsibility and demonstrate respect for the rights, opinions, and property of others in the classroom, the school, and in the larger community

Critical Thinking Skills

C.1 Clarifying Issues and Terms

- C.11 Identify central issues or problems
- C.12 Identify similarities and differences
- C.13 Determine which information is relevant
- C.14 Formulate appropriate questions
- C.15 Express problems clearly and concisely
- C.16 Recognize individual and group value orientations and ideologies

C.2 Judging and Utilizing Information

- C.21 Recognize stereotypes and cliches
- C.22 Recognize obvious bias, emotional factors, propaganda, and semantic slanting
- C.23 Distinguish among fact, opinion, and reasoned judgement
- C.24 Recognize simple inconsistencies and contradictions
- C.25 Recognize simple unstated assumptions
- C.26 Recognize clearly insufficient data

C.3 Drawing Conclusions

- C.31 Identify reasonable alternatives
- C.32 Predict possible consequences
- C.33 Test conclusions or hypotheses
- C.34 Reason hypothetically
- C.35 Identify causal claims/generalizations/analogies
- C.36 Recognize indirect or extended implications
- C.37 Recognize immediate implications

Democratic Values and Beliefs

The history-social science curriculum, kindergarten through grade twelve, should be most particularly and most explicitly concerned with those substantive values that form the common core of American citizenship. At all grade levels and subjects, and in accordance with the developmental capabilities of students, the curriculum focuses on the basic civic values and principles which undergrid our democratic, constitutional order.

V.1 **Unifying, cohesive elements of a democratic political community (Unum)**
- V.11 Justice (Respect for Law, Rights for All, Impartiality)
- V.12 Equality (Equal Opportunity, Equity)
- V.13 Truth (Honesty, Respect for Fact, Integrity)
- V.14 Authority (Following Rules, Obeying Leaders, Accepting Orders)
- V.15 Responsibility (Following Through, Efficiency)
- V.16 Participation (Involvement)
- V.17 Respect for persons and property (Security, Protection, Private Ownership)
- V.18 Personal obligation for the public good (Service, Support, Interdependence, Cooperation, Know the Law)

V.2 **Pluralistic, individualistic elements of diverse society (Pluribus)**
- V.21 Diversity (Variety, Individual Differences)
- V.22 Privacy (Right to Seclusion)
- V.23 Freedom (Right to Independent Action, Choice, Speech and Expression, Religion and Conscience)
- V.24 Due process (Fairness, Protection of Minority Views)
- V.25 Human rights (Life, Liberty, Self-Esteem, Dignity, Compassion)

History-Social Science Content by Grade Level Settings

Kindergarten -- Myself and Others in My World

Learning about the physical, social, and emotional dimensions of self and others is critical to the development of a positive self-concept and an appropriate entry into the history-social science program. Comparisons with other living things may also help students to understand their uniqueness as human beings. **Framework** topics and suggested learning activities include:

K.1 **Finding my way in my world (geography skills)**
- K.11 Know and use terms related to location, direction, and distance (up/down, left/right, here/there, near/far)
- K.12 Recognize a globe as a model of the earth
- K.13 Recognize and use terms that express relative size and shape (big/little, large/small, round/square)

* * *

11.18 **Developments at home and abroad (c. 1964-1974)**
- 11.181 Military commitments in Vietnam
- 11.182 Antiwar protests and the cultural revolution
- 11.183 Nixon's rapprochement policy with China and Russia
- 11.184 Withdrawal from Vietnam
- 11.185 Earth Day, 1970, and the political use of the environment
- 11.186 Washington: Watergate and the resignation of Richard Nixon
- 11.187 Steady movement of Americans toward sunbelt states

11.19 **The contemporary scene (1974-present)**
- 11.191 Role of political parties
- 11.192 Progress toward women's equality
- 11.193 Developments in the space and computer age
- 11.194 The continuing role of the environment as a prime social concern
- 11.195 The price of world leadership: continued cold war and defense spending
- 11.196 High standard of living: another area of world leadership
- 11.197 Economic challenges: inflation, high interest rates, the soaring national debt, taxation dilemmas, and spiraling costs of social security and health care
- 11.198 Foreign competition, dependence on foreign oil, and transnational economic development; effect on U.S. living standards

11.20 **Influence of geography**

11.200 **Other objectives appropriate to course**

Grades Nine Through Twelve
American Government, Civics, and Economics

As students mature and prepare to claim additional rights and to assume additional responsibilities as citizens, it is essential that they engage in a more penetrating study of American government. Students also need to acquire a better understanding of the other economic, political, and social systems in the world and to examine the role of the individual in those systems.

By the time students graduate, they should be able to understand how the American political processes work. In addition to becoming familiar with the structure and operation of the political systems in the United States, students should be able to analyze some of the conflicts that confront the nation. In so doing, students will develop the ability to be effective decision makers and responsible citizens.

The *Model Curriculum Standards* provides suggestions for organizing the knowledge and skills associated with civic and economic competence. The topics that follow are drawn from the model curriculum standards.

American Government and Civics

12.1 **Origins and background of American government**
- 12.11 Prevailing values of the founding fathers
- 12.12 Social conditions in North American colonies
- 12.13 Declaration of Independence
- 12.14 Federalist Papers
- 12.15 Principles of government considered essential
- 12.16 Evolvement of the Constitution through compromises, balancing conflicting goals
- 12.17 Articles of Confederation
- 12.18 United States Constitution

12.2 **Structure and operation of American institutions**
- 12.21 Structure, operation, and capacity for change of U.S. institutions:
  - 12.21-1 The Congress
  - 12.21-2 The presidency
  - 12.21-3 The bureaucracy
  - 12.21-4 The judiciary
  - 12.21-5 Political parties
- 12.22 Formulation of government policy through interaction of major institutions (experts, politicians, interest groups, courts)

12.3 **The role of the individual in American government**
- 12.31 Social and political differences in the population influence political outcomes at the local, state, and federal levels
- 12.32 Political, civic, and social participation in a democracy:
  - 12.32-1 Types of elections
  - 12.32-2 Voting
  - 12.32-3 Political parties
  - 12.32-4 Civic participation

12.4 **Civic liberties and civil rights**
- 12.41 Bill of Rights:
  - 12.41-1 Historic background
  - 12.41-2 Contemporary issues
- 12.42 Amending the Constitution
- 12.43 Judicial review
- 12.44 Tensions between desire for individual freedom, need for individual ethical behavior, will of the majority, need for public order, and the relations of these tensions to contemporary domestic issues

12.5 **Federal, state, and local government**
- 12.51 Similarities and differences in structure and operation of governments:
  - 12.51-1 Federal, state (California), local
  - 12.51-2 Executive, legislative, judicial
- 12.52 Federal, state, and local government responsibilities (policy area)
- 12.53 Close relationship between federal and state and local governments
- 12.54 Federal, state, and municipal legal systems manage conflict between individuals, groups, and institutions
- 12.55 Direct democracy:
  - 12.55-1 Origins in Progressive movement
  - 12.55-2 Initiative, referendum, recall

12.6 **The United States and the world**
- 12.61 Changes in national policy, from insulation to world leadership:
  - 12.61-1 Staying aloof from foreign entanglements
  - 12.61-2 1900 to 1914; emerging into a world scene
  - 12.61-3 World War II, United Nations, and world leadership
- 12.62 Post-war preoccupation with security:
  - 12.62-1 Domestic issues
  - 12.62-2 Foreign policy

12.7 **Taking stock: An evaluation of contemporary American government**
- 12.71 Analysis of government system in light of contemporary issues:
  - 12.71-1 Domestic issues
  - 12.71-2 Foreign entanglements
- 12.72 Comparing the American government with other contemporary forms:
  - 12.72-1 Structure of government
  - 12.72-2 Comparison of goals
  - 12.72-3 Present-day norms in government

Economics

12.8 **Fundamental concepts of economics**
- 12.81 Scarcity
- 12.82 Economic systems; traditional, command, market, mixed
- 12.83 Production, exchange, consumption
- 12.84 Opportunity cost
- 12.85 Specialization
- 12.86 Money
- 12.87 Market networks
- 12.88 Factors of production
- 12.89 Trade-offs
- 12.810 Economic performance indicators:
  - 12.810-1 Income distribution
  - 12.810-2 Gross national product
  - 12.810-3 Index numbers
- 12.811 Graphic representation of economic data
- 12.812 Interdependence

APPENDIX B

Curriculum Matrix and Sample Program Descriptions

History/Social Science Technology In Curriculum Matrix

EMPHASIS
MAJOR: ●
MINOR: ○

Programs Reviewed

Settings/Courses and Processes

Programs Reviewed	Myself And Others In My World (K)	People At Home And At School (1)	People As Members Of Groups (2)	People As Members Of Communities (3)	The People Of A Region: California (4)	The People Of A Nation: U.S.A. (5)	Our World, Its Diverse Peoples/Societies (6)	The Changing World (7)	The American Experience (8)	World Hist., Culture, And Geography (9/10)	United States History And Geography (11)	American Government, Civics, And Economics (12)	Critical Thinking (Processes)	Study/Basic Skills (Processes)	Social Skills (Processes)	Values/Beliefs (Processes)
Across Cultures TV							●	●		●			●	○	○	○
Africa							●			●			●	●	●	○
American Government												●	○	○	○	
Amer. Gov. I-V/Amer. Gov.												●	○	○	●	◐
American History									●		●					
Amer. Hist. #1 Know. Mast.									○		●	●	○	○	○	
Amer. Hist. #2 Know. Mast									●		●		●	●	●	○
Amer. Hist. Achievment I									○		●		○	○		
Archeology Search								●	●		●		●	●	○	
Bean Sprouts TV			◐			●							●	○	●	◐
Beyond the Rising Sun							●	○		●						
Bill Becomes Law (A)									●			●	●	○	●	◐
Black Amer./The Medalists									●		○		○	○	○	○
Bumble Games	●	●	●	●	◐								●	○		
By the People TV						●	○	○	●	○	○	●	●	○	●	◐
California Dreams TV					○	○			●		○	○	●	○	○	○
Cartels and Cutthroats												●	◐	◐	○	○
Choice or Chance						●			●				●	◐	◐	◐
Computers in Gov.						●				●		●	◐	◐	○	○
Consumer Connection TV												●	◐	○	○	◐
Continents/The Medalists							●	●					○	○		
Crosscountry USA						●	●	●					◐	○	○	○
Current Events/Know. Mast.										●	◐	●	○	○	○	
DatelineTime-Traveler						●	●	●					○	○		○
Demo-Graphics										●	○	●	◐	◐	◐	○
Discovery						◐	◐	◐					◐	◐	○	
Easy Graph/Grolier Home					◐	◐	◐						○	○		
Econ./Knowledge Mast.											○	◐	○	○		

SERIES TITLE. . SUMMER OF JUDGEMENT

 # OF PROGRAMS. . . . . 4 **LENGTH OF PROGRAM. . .** 30 minutes

SOURCE. . . . . . County Media Center/Regional ITV Agency/WETA

AUDIENCE. . . . . . Grade 12

DESCRIPTION. . . . . . This is a four-part look at the Watergate Hearings. Most of the key characters are interviewed and profiled. An analysis of the events' impact on the American political system is presented in program #4.

SETTING/COURSE. . . . 8.0 The American Experience; 11.0 United States History and Geography; 12.0 American Government, Civics and Economics

TOPICS. . . . . . 8.2 Ideals, institutions, and values of the United States; 11.18 Developments at home and abroad (c. 1964-1974); 12.2 Structure and operation of American institutions.

EVALUATION. . . . . . Content objectives relate to the framework grade level setting: exemplary
Overall instructional quality: exemplary
Overall technical quality: exemplary
This series' strengths are: it definitely shows the power of congressional powers and shows history being made.

OVERALL RATING. . . . EXEMPLARY

SUPPORT MATERIALS . Not available to review

PROGRAM FORMAT. . . N/A

POTENTIAL USE(S). . . Provides factual knowledge; in-depth or specialized study; supplementary course of study

COPYRIGHT DATE. . . . 1983

OBJECTIVES . . . . . . N/A

CRITICAL THINKING

CLARIFY ISSUES. . . . C.11 Identify central issues or problems.
C.12 Identify similarities and differences.
C.14 Formulate appropriate questions.

JUDGE & USE INFO. . C.22 Recognize obvious bias, emotional factors, propaganda, and semantic slanting.
C.24 Recognize simple inconsistencies and contradictions.
C.25 Recognize simple unstated assumptions.

DRAW CONCLUSIONS . C.36 Recognize indirect or extended implications.
C.37 Recognize immediate implications.

STUDY/BASIC SKILLS . B.1 Acquire information through listening, observing, reading, and utilizing community resources.
B.3 Compile, organize, and evaluate information presented in books, periodicals, and other media.
B.5 Communicate orally and in writing.

SOCIAL SKILLS. . . . . S.1 Feel for others; empathize with them; be sensitive to their needs, problems, and aspirations; see things as others see them; take the perspectives of others.
S.2 Understand multiple perspectives of others.

VALUES/BELIEFS. . . . N/A

PROGRAM DESCRIPTION . . . . . .

1. The Watergate Committee - This segment details the formation of the Watergate Committee and the early days of hearings. Issues discussed are public interest in the hearings, the role of humor, and ethics. (8.2, 11.18, 12.2)
2. John Mitchell and John Dean: Profiles and Testimony - Deals with the testimony of John Mitchell and John Dean, each of whom were questioned on the role of the President in Watergate. (8.2, 11.18, 12.2)
3. The White House Tapes - Describes the committee's discovery of Nixon's taped conversations and recounts the testimony of top aide John Ehrlichman. (8.2, 11.18, 12.2)
4. "Dirty Tricks," Impeachment, Resignation - Examines Haldeman's testimony, the witnesses who testified about the "Dirty Tricks" of the Nixon campaign, the House committee impeachment procedures, and effects of Watergate on the American political system. (8.2, 11.18, 12.2)

TITLE/SERIES. U.S. GOVERNMENT PRODUCTIVITY

SOURCE. Scholastic, Inc., 730 Broadway, New York, NY 10033

AUDIENCE. Grades 8-12, Adult, College

DESCRIPTION. U.S. Government (which must be used with PFS: File -$115) presents five separate data base activities which focus on federal spending (students retrieve and interpret government statistics), presidential elections (presents election results and voting patterns by party from 1789-1984), the Constitutional Convention (generates statistical information on participants and states), and state and local governments (students create their own data base files). Can be used with PFS: Report or PFS: Graph to organize information or print graphs.

SETTING/ COURSE. 5.0 The People of a Nation: The United States; 8.0 The American Experience; 11.0 United States History and Geography; 12.0 American Government, Civics, and Economics

TOPICS. 12.1 Origins and background of American government; 12.3 The role of the individual in American government; 11.19 The contemporary scene (1974- present); *8.200; *11.200 (*See Curriculum Scope and Sequence for text.)

EVALUATION. EXEMPLARY - Develops the content topics and objectives; develops the process topics and skills or values; provides up-to-date content; presents facts impartially; overall quality of support. DESIRABLE - Motivational for students. ACCEPTABLE - Overall technical quality. COMMENTS - Provides a bank of information that can be searched, manipulated, changed and updated. It sharpens critical thinking and investigative skills through data interpretation and analysis.

OVERALL RATING. DESIRABLE

TYPE OF PROGRAM. Data base (Application)

SUPP. MATERIAL. Extensive guide: suggests class activities, sample lesson plans, exercises, supplemental activities.

POTENTIAL USE(S). Motivator; enrichment; post-lesson activity; supplement; extend. Students can complete research projects by generating data to use as a reference for class discussions and reports.

EASE OF USE. Some teacher and student computer experience required. Moderate teacher preparation required. Teacher must be very familiar with the program.

SUGGESTED TIME PER SESSION. 15-45 minutes **# OF SESSIONS.** Variable

STUDENT GROUP. Individuals; pairs; small groups (3-5); large group; class

NEEDED EQUIP. Apple II+, IIc, IIe; IBM PC, PCjr; second disk drive, printer, and PFS: Files are required. PFS: Report and PFS: Graphs are useful.

COPYRIGHT DATE 1984-85 **PRICE** $99.95

OBJECTIVE(S)

MAJOR. . . . . 12.11 Prevailing values of the founding fathers; 12.14 Federalist Papers; 12.15 Principles of government considered essential; 12.16 Constitution evolved through compromises, balancing conflicting goals; 12.17 Articles of Confederation; 12.18 United States Constitution; 12.32 Political, civic, and social participation in a democracy; 11.196 Economic challenges: Inflation, high interest rates, the national debt, taxation dilemmas, and social security and health care

INCIDENTAL . . N/A

CRITICAL THINKING

CLARIFY ISSUES . C.11 Identify central issues or problems; C.12 Identify similarities and differences; C.13 Determine which information is relevant; C.14 Formulate appropriate questions; C.15 Express problems clearly and concisely; C.16 Recognize individual and group value orientations and ideologies.

JUDGE/USE INFO . C.23 Distinguish among fact, opinion, and reasoned judgment; C.24 Recognize simple inconsistencies and contradictions; C.25 Recognize simple unstated assumptions; C.26 Recognize clearly insufficient data; C.22 Recognize obvious bias, emotional factors, propaganda, and semantic slanting.

DRAW CONCL. . . . C.31 Identify reasonable alternatives; C.32 Predict possible consequences; C.33 Test conclusions or hypotheses; C.36 Recognize indirect or extended implications; C.37 Recognize immediate implications; C.34 Reason hypothetically.

STUDY/BASIC SKILLS. . . . . . B.1 Acquire information through listening, observing, reading, and utilizing community resources; B.2 Locate information in textbooks, encyclopedias, specialized dictionaries, almanacs, and other reference materials; B.3 Compile, organize, and evaluate information presented in books,, periodicals, and other media; B.4 Extract and interpret information from maps, models, graphs, charts, tables, pictures and cartoons; B.5 Communicate orally and in writing.

SOCIAL SKILLS. . . S.2 Understand multiple perspectives of others; S.4 Recognize one's own biases and prejudices on historical and social phenomena; S.5 See people as individuals rather than applying stereotypes to them or classifying them arbitrarily as members of particular groups; S.7 Work effectively with others as members of groups; S.8 Give and receive constructive criticism; S.9 Accept responsibility and demonstrate respect for the rights, opinions, and property of others in the classroom, the school, and in the larger community.

VALUES/BELIEFS. . V.14 Authority, V.15 Responsibility, V.16 Participation, V.13 Truth, V.12 Equality, *V.18, *V.21, *V.23, *V.24, *V.25

PROGRAM FORMAT . . . . . . *(See Curriculum Scope and Sequence for text.) Teacher can change content; text emphasized.

APPENDIX C

DataRelator Printout for Software and ITV Programs

DataRelator printout for American Government and Civics Topics

12.1 Origins and background of American government

Cabinet: History-Social Science
Drawer: Software
TITLE: AMERICAN GOVERNMENT
AUDIENCE/GRADE: 11-College, Grade 8 Gifted
DESCRIPTION: This program provides 760 questions in the areas of historical documents, the party system, and the American government. The user may select both areas of concentration and levels of difficulty. A multiple choice game format is used.
[Grade Level Setting/Course]:
[12.0 American Government, Civics, and Economics]
[Topics]:
[12. 2 Structure and operation of American Institutions],
[12. 1 Origins and background of American government],
[12. 4 Civic liberties and civil rights],
[12. 5 Federal, state and local government]
SUPPORT MATERIAL: Directions limited to program operation.
EASE OF USE: No teacher or student computer experience required. Minimal teacher preparation required.

TITLE: U.S. CONSTITUTION
AUDIENCE/GRADE: 8-12
DESCRIPTION: This program presents the Constitution and Bill of Rights in a tutorial format. A crossword puzzle and multiple-choice questions are used to test knowledge and comprehension. Finally, students apply the principles of the Bill of Rights to a controversial case study, examine the pros and cons, and make a decision.
[Grade Level Setting/Course]:
[8.0 The American Experience],
[11.0 United States History and Geography],
[12.0 American Government, Civics, and Economics]
[Topics]:
[8. 2 Ideals, institutions, and values of the United States],
[5. 5 Founders of our nations],
[11. 6 A new nation (c. 1781-1800)],
[12. 1 Origins and background of American government],
[12. 4 Civic liberties and civil rights]
SUPPORT MATERIAL: Extensive guide: suggests class activities.
EASE OF USE: No teacher or student computer experience required. Minimal teacher preparation required.

12.1 Origins and background of American government (continued)

TITLE: U.S. GOVERNMENT PRODUCTIVITY
AUDIENCE/GRADE: 8-12, Adult, College
DESCRIPTION: U.S. Government (which must be used with PFS: File -$115) presents five separate database activities which focus on federal spending (students retrieve and interpret government statistics), presidential elections (presents election results and voting patterns by party from 1789-1984), the Constitutional Convention (generates statistical information on participants and states), and state and local governments (students create their own database files). Can be used with PFS: Report or PFS: Graph to organize information or print graphs.
[Grade Level Setting/Course]:
[5.0 The People of a Nation: The United States of America],
[8.0 The American Experience],
[11.0 United States History and Geography],
[12.0 American Government, Civics, and Economics]
[Topics]:
[12. 1 Origins and background of American government],
[12. 2 The role of the individual in American government],
[11.19 The contemporary scene (1974-present)],
8.200,
[11.200 Other objectives appropriate to course]
SUPPORT MATERIAL: Extensive guide: suggests class activities, sample lesson plans, exercises, supplemental activities.
EASE OF USE: Some teacher and student computer experience required. Moderate teacher preparation required. Teacher must be very familiar with the program.

12.2 Structure and operation of American institutions

Cabinet: History-Social Science
Drawer: Software
AMERICAN GOVERNMENT
AMERICAN GOVERNMENT I-V/American Government
BILL BECOMES A LAW (A)
PRESIDENT ELECT
PRESIDENT'S CHOICE

Cabinet: History-Social Science
Drawer: Instructional Television
SERIES: EVERY FOUR YEARS
NUMBER OF PROGRAMS: 3
LENGTH OF PROGRAM: 60 minutes
AUDIENCE/GRADE: 8 -12
DESCRIPTION: This series looks at the institution of the presidency. The role of public opinion about the presidency is examined, as is the growth of the presidential staff and the changes in presidential power over the past century.
[Grade Level Setting/Course]:
[8.0 The American Experience],
[10.0 World History, Culture, and Geography],
[11.0 United States History and Geography],
[12.0 American Government, Civics, and Economics]
[Topics]:
[8. 2 Ideals, institutions, and values of the United States],
[11.18 Developments at home and abroad (c.1964-1974)],
[11.12 The new Manifest Destiny and the rise of the United States as a world power (c.1880-1918)],
[11.13 The era of reform (c.1898-1917)],
[12. 2 Structure and operation of American Institutions],
[12. 6 The United States and the world]
SUPPORT MATERIALS: Teacher's manual
Overall quality of guide: desirable

SERIES: SUMMER OF JUDGEMENT
NUMBER OF PROGRAMS: 4
LENGTH OF PROGRAM: 30 minutes
AUDIENCE/GRADE: 12
DESCRIPTION: This is a four part look at the Watergate Hearings. Most of the key characters are interviewed and profiled. An analysis of the events' impact on the American political system is presented in program #4.
[Grade Level Setting/Course]:
[8.0 The American Experience],
[11.0 United States History and Geography],
[12.0 American Government, Civics, and Economics]
[Topics]:
[8. 2 Ideals, institutions, and values of the United States],
[12. 2 Structure and operation of American Institutions],
1.18 Developments at home and abroad (c. 1964-1974)
SUPPORT MATERIALS: Not available to review

APPENDIX D

TIC Program Software Distribution

Table D-1. Software Distributed by California State Department of Education

SOFTWARE PROGRAM TITLE	PUBLISHER	Number of Schools, Grade Level Enrollment								
		K-3	K-6	K-8	K-12	6-9	7-12	9-12	County#	Total
WHO, WHAT, WHERE, WHEN...	HARTLEY	199	3,666	739	28				155	4,787
THAT'S MY STORY	LEARNING WELL	199	3,666	739	28				155	4,787
MAGIC SLATE	SUNBURST	199	3,666	739	28	860			155	5,647
THE FACTORY	SUNBURST	199	3,666	739	28	860	126		155	5,773
GRAPHING EQUATIONS	SUNBURST				28		126	1,148	155	1,457
TEN CLUES*	SUNBURST		3,666	739	28	860	126	1,148	155	6,722
MICKEY'S SPACE ADVENTURE	DISNEY		3,666	739	28				155	4,588
FRIENDLY FLIER	GROLIER		3,666	739	28				155	4,588
NARRATIVE WRITING TOOL	INTERLEARN			739	28	860	126		155	1,908
THE WRITER'S ASSISTANT	INTERLEARN			739	28	860	126		155	1,908
OH, DEER*	MECC			739	28	860	126		155	1,908
WRITING A CHARACTER SKETCH	MECC				28		126	1,148	155	1,457
SUPOR SCOOP	COMPRESS				28		126	1,148	155	1,457
SCIENCE TOOLKIT	BRODERBUND				28		126	1,148	155	1,457
ISLAND SURVIVORS	HOLT			739	28	860	126		155	1,908
PFS FILE*	SCHOLASTIC			739	28	860	126	1,148	155	3,056
U.S. HISTORY DATA BASE*	SCHOLASTIC			739	28	860	126	1,148	155	3,056
APPLE WORKS	APPLE			739	28	860	126	1,148	155	3,056
MATH WORLDS-SAMPLING	HEATH					860			155	1,015

* Included in History-Social Science Resource Guide

County Offices of Education (Provide special education, court schools, etc.)