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Current Titles	Professor Emeritus of Informatics School of Informatics, Computing, and Engineering Professor Emeritus of Instructional Systems Technology School of Education
Degrees	B.S., University of Illinois at Urbana, 1969, with a major in Psychology and minors in Mathematics and Special Education M.S., University of Illinois at Urbana, 1972, in Educational Psychology Ph.D., University of Illinois at Urbana, 1973, in Educational Psychology
Date of Birth	July 30, 1947
Administrative Positions	<i>Luddy School of Informatics, Computing, and Engineering Indiana University</i>
2009 – July 2018	Director of Graduate Studies in Informatics Responsible for the development of policies, administration, and execution of the Master's and Ph.D. programs in Informatics. We serve approximately 250 graduate students per year.
2006 – 2008	Chairperson, Department of Informatics, School of Informatics The Department of Informatics is one of two departments in the School of Informatics on the Bloomington campus (the other is Computer Science). It consists of approximately 40 faculty divided among four research groups: Life Sciences Informatics, Technology-Centered Informatics, Human-Centered Informatics, and Complex Systems.
2005 - 2007	Executive Associate Dean, School of Informatics The Executive Associate Dean is the "Chief Operating Officer" of the School of Informatics on the Bloomington campus.
2004 - 2007	Associate Dean for Graduate Studies and Research

The Associate Dean for Graduate Studies and Research is responsible for graduate studies across the two departments—Informatics and Computer Science.

2002 - 2005

Director, Human-Computer Interaction (HCI) Design Program (HCI/d)

From a pedagogical point of view, the goal of the HCI/d master's program was to foster students with diverse and substantive skills. Our graduates needed the interpretive vision to apply their skills in tangible and effective ways regardless of fashion within the academic HCI community. They needed to be able to demonstrate and effectively argue for the value of strategic, human-centered design to technology-centered and enterprise-centered (e.g., computer science and business) colleagues in their post-graduate life. They needed to be leaders with the power and influence to ensure that human-centered thinking drives technology and enterprise. They needed to be literate, capable, and engaging not only about design, but also about technology and enterprise. They needed to be well-grounded in the HCI literature, particularly in the cognitive and social sciences.

Fortunately, the School of Informatics at Indiana University was created to achieve these goals. Because we could draw on a community with diverse and interdisciplinary skills, we had the opportunity at the School to create a world-class program in HCI Design. To this end, my challenge as Director (along with my colleagues) was to build an exemplary faculty, curriculum, and atmosphere for learning. In fall 2005, Prof. Erik Stolterman took over the leadership of the program.

***WisdomTools, Inc.
Bloomington, Indiana***

1997 - 2008

Founder and Chairman

WisdomTools was a learning company first and a technology company second. Our principal product, *WisdomTools Scenarios*™, was a cognitive tool designed to leverage problem-based learning techniques, using case study, storytelling, and collaborative learning. Each scenario was designed to develop deep, insightful learning, a kind of “practical intelligence” or tacit knowledge.

As the company's Chief Learning Officer, I was responsible for Product Development – Imagineering, Software Design, Visual Communications Design, System Networking and Administration, and Product Management. *Scenarios* was used by clients such as Eli Lilly, DDB, I.B.M., Houghton Mifflin, Indiana University, the U.S. Army, AT&T, DaimlerChrysler, Accenture, the Kellogg School of Business, BlueCross BlueShield, and others.

In December, 2008, the company was sold to Information in Place, Inc., and they changed their name to [WisdomTools](#).

***Laboratory for Research and Development in Teaching and Learning
Center for Excellence in Education (CEE), Indiana University***

1991 - 1999

Director, Laboratory for Research and Development
in Teaching and Learning

The Center for Excellence in Education was a research and development center whose mission was to explore appropriate applications of technology in education. The Center performed its mission in two ways: 1) providing vendor-neutral, client-centered workshops, seminars, and institutes to K-12 schools, colleges and universities, and corporate training organizations on the use of current technologies for improving instruction; and 2) conducting research and development on new applications of technologies that will provide important breakthroughs for the improvement of teaching and learning; examples of activities were the development of new visualization web tools ("TimeWeb") and new strategies for corporate training ("Time-Revealed Scenarios"). Our work was funded by grants from Turner Broadcasting, the National Endowment for the Humanities, the Fund for the Improvement of Postsecondary Education (FIPSE), and private foundations and corporations. The Laboratory's mission was to design, develop, and evaluate new computer and information technologies to improve teaching and learning in the school, the workplace, and the home. The Lab's goal was to implement the best ideas in the marketplace. To this end, the WisdomTools group was formed to create an independent spin-off business (in part owned by Indiana University's Advanced Research and Technology Institute) whose focus would be the design of "real learning" environments for the workplace. In June, 1999, in the final days of the CEE, WisdomTools, Inc. was incorporated. See www.wisdomtools.com for information on the company.

***Authorware, Inc.
Minneapolis, Minnesota***

1990 - 1991

Director, Professional Services

Authorware's mission was to provide the next generation of software products and services to build mission critical learning, reference, and performance support systems. Authorware's Professional Services organization offered customers a wide range of expertise in the design and implementation of comprehensive educational and training systems. Special training in Authorware's development methodology was provided as well.

This start-up merged with Macromind Director to form Macromedia, eventually bought by Adobe.

***Computer-based Education Research Laboratory (CERL)
University of Illinois***

1978 - 1990

Assistant Director, CERL

Head, Courseware and Curriculum Applications (CCA) Group

The mission of the Courseware and Curriculum Applications Group is to create and implement model computer-based curricula that address nationally recognized educational needs.

To realize this mission,

- we researched and developed techniques that integrated instructional design theories, user interface principles, and software algorithms to exploit the strengths of the computer as a medium for education

- we used these techniques to create courseware and the supporting systems needed to build comprehensive curricula
- we implemented, with cooperating institutions, these curricula in a variety of educational environments
- we revised these techniques, materials, procedures, and principles on the basis of experience and systematic analysis.

Historically, we addressed adult basic education, creating courseware and curricula in reading comprehension and language arts. We developed management and testing systems to deliver these and other curricula; *SYS 4* and *Testing 1-2-3* are the current versions of these systems. We implemented these materials in a variety of environments where they served thousands of students.

Building on these achievements in adult basic education, our efforts focused on literacy instruction. As new programs were developed, they continued to employ the capacities of the central system to manage materials, students, and data. At the same time, and in cooperation with the hardware and software groups, we sought to enhance instructional effectiveness by exploiting the power of distributed processing and multimedia techniques.

Between 1978 and 1990, the group designed, programmed, developed, and tested computer-based instructional programs under grants and contracts totaling \$ 6.5 million (approximately \$13.6 million in 2010 dollars).

**Last Decade of
Research &
Creative Activities
2001-2011**

Over the last ten years, I've been deeply involved in School of Informatics administration; nevertheless, I've engaged in a number of research and creative activities. Those marked with an asterisk () indicate current activities:*

WisdomTools™. WisdomTools, Inc., the Indiana University spinout company that I founded, was committed to optimizing the potential of our clients' employees. We accomplished this by strengthening employee collaborative skills and enhancing their ability to make critical judgments, improve their strategic decisions, and to develop deep insights about their business or organization. At WisdomTools, we believed that new models of training were required to incorporate and sustain newly learned skills in a connected, knowledge economy—an economy increasingly characterized by rapid change and a distributed, mobile workforce.

To support the learning needs of individuals in a connected economy, we replaced the linear, content-centered classroom with a new kind of learning environment. This environment changed the way we learned and the way content was delivered. WisdomTools played a key role in defining this new Digital Learning Environment—developing the software tools to produce it, collaborating with others to build innovative learning products for use in it, and advising organizations on how to create it. WisdomTools marketed its products and services to academic and corporate clients worldwide; the company was sold in December 2008 to Information in Place, Inc.

Design of Internet-based Learning Tools. We developed new Internet-based visualization and collaboration tools for databases typical of the social sciences and humanities. These tools are important for students because their use encourages insightful, multidisciplinary thinking. These tools are called *TimeWeb™* and *MapWeb™*. The U.S. Department of Education Fund for the Improvement of Post-Secondary Education (FIPSE) supported this research.

WisdomTools Scenarios™. We developed a new paradigm for corporate education that overcame the “disconnect” of traditional training methods and changed the behavior and attitudes of participating cohorts. *Scenarios* incorporated case study methodology, simulation, and story telling; unfolded over time as episodes; occurred in a rich context and was authentic in form; included just-in-time access to primary sources; allowed explorations of multiple paths from various perspectives; and involved interactive real-world tasks, with no single correct answer. *Scenarios* were used in any area requiring complex judgment and strategic thinking. This work was supported in part by the U. S. Agency for International Development (USAID) and the National Institutes of Health (NIH).

Design of Virtual Textbooks. If one were to identify the single most dominant instructional tool in the classroom today, it would be the textbook. Whether the subject is sixth grade science, high school French, or college calculus, the textbook is central to the organization and presentation of information. Yet, one has to assume that in the near future we will move away from this linear, paper-oriented instructional tool to a non-linear, hypermedia, networked, open-ended, multi-disciplinary interactive system. How will these virtual “textbooks” (or perhaps, more appropriately labeled “virtual learning environments”) be designed? What kinds of authoring environments will be needed to produce these instructional systems? How will such textbooks be developed, financed, and marketed? These were some of the research and development problems addressed in this area. Turner Broadcasting and CNN supported this research.

- * **Design of Human Computer Interaction.** Human-computer interaction (HCI) occurs at the intersection of machines, people, information, and tasks. Growing emphasis has been placed on the development of these interactions — an aspect of design loosely termed “interaction design.” This emphasis becomes increasingly important as the number of computers and computer-based appliances used by non-specialists in homes, work environments, schools, and libraries continues to rise. In fact, it is now generally recognized that the nature and quality of user interactions are considerations that should be integral to the entire software design and development process. Current work centers around the design of new collaborative environments for deep conversation as well as including the development of viral, socially networked learning systems; the new project is called **Glerb**.
- * **Design Pedagogy.** *“Welcome to ‘the swamp’ – the place of messy, ill-structured, yet important problems. Here you will recognize that the only way forward is through ‘the generation of possible solutions and their gradual improvement.’ Here you will begin the transformation from non-designer to designer.” Thus begins an incredible journey where there are no right answers and even the problems are uncertain. The students call the experience ‘boot camp.’ One self-assured student proclaims ‘I am not afraid,’ and the professor responds, channeling the wisdom of Yoda, ‘Oh you will be!’ The class laughs nervously. I am the professor. This is my class...*

This is the introduction to the book I am writing: *The Design Habit*. The book is about interaction design, but not in the usual approach to the topic. It is about the education of interaction designers—the design of designers. It represents over 35 years of teaching design, and 25 years teaching interaction design. It is about how non-designers transform into designers. It’s about an unusual course that begins this metamorphosis. And at the same time, it is one person’s view of the essentials of human-computer interaction design.

The book follows a cohort of master’s students through the first semester of “Interaction Design Practice” (IDP). The book is about design – the design of a course, interaction design itself, and the experience of these students as they navigate through the course. Three perspectives will be experienced in this book: the mindset of the instructor, the mindset of the students, and the content itself. A fourth perspective will be shared as well; at various points along the way, former students will reflect in their own words how they experienced the course as a student, as a mentor, and now as a professional; they will do this in the context of particular course themes.

* *National Science Foundation (NSF): Design Methods: How They are Understood, Selected, and Used by Practitioners* (Erik Stolterman and Martin Siegel, Co-PIs)

Design is today seen as a successful approach for innovative and creative product and service development. There are many attempts at improving interaction design and human-computer interaction practice by developing new approaches, methods, tools and techniques that would bring a more refined design approach to professional practice.

Indeed, many of the proposals to the NSF-HCC program are aimed at developing methods, techniques, and tools that are based on a sophisticated understanding of the fundamental nature of human-computer interaction and of design. These attempts are based on a belief that when well-developed design methods are made suitable for professional practice, they will lead to more creative and innovative products and services.

Our research proposal is focused on an overlooked aspect in the field of HCI and interaction design which has to do with the way practitioners understand, evaluate, select, and adapt design methods (approaches, methods, techniques, and tools) for their design process needs. Even though design as an approach has achieved a lot of attention lately, we have found that little has been done to examine what design methods practitioners actually use, why they use them, and how they think about and understand these methods.

We also believe it is crucial with research aimed at examining the intentions, goals, principles, strategies and thinking among *those who develop new design methods*. How do these developers understand the professional practitioner who is supposed to use the design method, what do they see as essential qualities of a practical and useful design method, and how do they design their methods to cope with the practicalities and problems of getting their methods used in practice?

In this 3-year project, we will examine the relationships among three entities:

- (i) the developers of design methods;
- (ii) the design methods themselves; and
- (iii) the professional design-practitioners using these methods.

Teaching

Indiana University

2015 - 2020 Undergraduate course, **Interaction Design Practice**, I441, centered around three real-world design projects created by participating companies. Our goal was to teach students how to think and behave like a designer. We also recognized that design is not a solitary discipline; it is a collaborative act. To this end, we emphasized protocols for team decision-making and workflow. The three projects were given to us by real companies and critiqued by senior interaction designers at the company. The companies were both well-known as Airbnb, PlayStation, or Bleacher Report, or smaller companies that were not as well known. Students were required to apply to be a part of this class.

2011 - 2018 Graduate course, **Rapid Design for Slow Change**, I590.
See: Siegel, M. A. (2016). 6 The Rapid (Interactive) Design Studio for Slow (User and Learner) Change. *Studio Teaching in Higher Education: Selected Design Cases*, 73.

1993 - 2018 Graduate course, **Interaction Design Practice**, was cross-listed in the Department of Informatics as I541 and I441 (undergraduate section), in the Instructional System Technology Department as R685: **Human-Computer Interaction Design**. (Sometimes cross-listed with Telecommunications, T452) The course was taken by students in Informatics, Computer Science, Education, Information Science, Telecommunications, Journalism, and Cognitive Psychology. In some years I taught the **HCI/design master's capstone course** (a two-semester course), I694.

Advisor in Informatics, Education, and Cognitive Science for graduate students in computer- and Internet-based education, human-computer interaction design, distributed learning, and instructional research.

2010 - 2020 Undergraduate course, **Human-Computer Interaction Design**, I300 (2013 enrollment of 151 students; typically 70-90 students).

2002 Graduate course, Instructional System Technology Department, R685: **Instructional Solutions Design**.

1994 Undergraduate seminar course, Telecommunications Department, R404: **Multimedia Design**.

University of Illinois

1973 - 1990 Department of Educational Psychology. Advisor for graduate students in computer-based education, computer-human interface design, instructional research, curriculum development, and adult literacy.

1975 - 1990 Advanced undergraduate and graduate course, EDPSY 363: **Instructional Design**. For five consecutive years, included in "List of Teachers Ranked as Excellent by Their Students."

- 1985 - 1990** Graduate course, EDPSY 490 and (since 1987) Information Science 450: Interactive Systems Design. Since the course started in 1985, included in "List of Teachers Ranked as Excellent by Their Students."
- 1986 - 1990** Mentor for students in the University of Illinois Honors Program.
- 1973 - 1975** Advanced undergraduate and graduate course, EDPSY 311: Psychology of Learning for Teachers. Included in "List of Teachers Ranked as Excellent by Their Students."
- 1971 - 1972** Teaching assistant for graduate course, PSYCH 306: Statistical Methods.
- 1968 - 1971** Teacher for preschool class, University Lab School (Colonel Wolfe School, Bereiter-Engelmann Program) and for kindergarten and first grade, Urbana Community Schools (educationally mentally handicapped program).
- 1968 - 1970** Specialist in Education. Developed training programs and coordinated practicum for Engelmann-Becker Follow-Through graduate and undergraduate trainees. Preservice training for Follow-Through teachers throughout the U.S. was based on training paradigms. Developed segments of the Direct Instruction Arithmetic, Reading, and Language programs (Distar); taught a seminar on curriculum development for the educationally disadvantaged child.
- 1968** Research and teaching assistant to Dr. Sidney Bijou, Child Behavior Laboratory.
- 1967** Teacher trainee, Bereiter-Engelmann program.

**Grants & Contracts
Funded as Principal
Investigator
(or Co-PI)**

***Indiana University* (Total funding level: \$ 4,025,798.)**

- 2011 – 2015** National Science Foundation (NSF): Design Methods: How They are Understood, Selected, and Used by Practitioners (Erik Stolterman and Martin Siegel, Co-PIs)
Approximate funding level: \$467,066
- 2011** iPad Faculty Learning Community. Indiana University. Funding level: \$1,200.
- 2010 – 2011** 21st Century Learning Spaces for a Human-Centered Computing Course Sequence: New Pedagogies, New Technologies in the School of Informatics and Computing. Indiana University.
Approximate funding level: \$19,770
- 2004 - 2008** Cognitive Science: New Frontiers in the Interdisciplinary Study of Mind, Learning and Intelligence (with Co-PI from COAS and School of Education)
Indiana University 2003 Commitment to Excellence (CTE)
Approximate funding level: \$881,162.

- 2002 - 2003** Behavioral Parent Training (with Co-PI Dr. Elizabeth MacKenzie), U.S. Department of Education, Office of Special Education and Rehabilitative Services
Approximate funding level: \$100,000.
- 1999 - 2000** Scenario-based Training of University Researchers in Ethics National Institutes of Health (NIH). (with the Indiana University Poynter Center)
Approximate funding level: \$ 100,000.
- Web-based Instruction for International Development of Agricultural Globalization U. S. Agency for International Development (USAID) (with the Indiana University Department of International Programs)
Approximate funding level: \$ 120,000.
- Scenario-Based Analysis and Assessment Research for Collaborative Systems. U. S. Army Research Laboratory (ARL)
Approximate funding level: \$ 99,000.
- 1998 - 2002** Web-based Visualization Tools for Undergraduate Inquiry. Fund for the Improvement of Postsecondary Education (FIPSE). (Co-PI with Jeanne Sept, Anthropology).
Approximate funding level: \$ 300,000.
- 1998** Problem-based Coaching Tool, Part II. Eli Lilly Corporation.
Approximate funding level: \$ 190,000.
- WisdomTools Business Development. Indiana University / ARTI
Approximate funding level: \$ 100,000.
- 1997** Problem-based Coaching Tool. Eli Lilly Corporation.
Approximate funding level: \$ 115,000.
- Regional Anesthesia CD-ROM. Mosby Publishing.
Approximate funding level: \$ 50,000.
- TimeWeb for the Underground Railroad. NCREL.
Approximate funding level: \$ 25,000.
- CEE Forum. Indiana University.
Approximate funding level: \$ 25,000.
- Prehistoric Puzzles. National Endowment for the Humanities (NEH). (Co-PI with Jeanne Sept, Anthropology).
Approximate funding level: \$ 145,000.
- 1996** WisdomTools. Indiana University.
Approximate funding level: \$ 235,000.
- Internet-based Distance Learning Program. Indiana University.
Approximate funding level: \$ 150,000.
- Glen Mills School Kiosk. Glen Mills School.
Approximate funding level: \$ 6,000.

Arikara Language Project. Institute for American Indian Studies.
Approximate funding level: \$ 10,000.

1995 Explore Anesthesiology CD-ROM. (Co-PI with George Sheplock) Ohmeda Corporation.
Approximate funding level: \$ 175,000.

Storytellers. O'Shaughnessy Foundation.
Approximate funding level: \$ 50,000.

1994 An Interactive Constructive Environment in Anesthesiology. Indiana University School of Medicine
Approximate funding level: \$ 8,000.

Turner Adventure Learning. Turner Educational Services, Inc. (Turner Broadcasting)
Approximate funding level: \$ 65,000.

World School for Adventure Learning.
Approximate funding level: \$ 1,600.

1993 Electronic Textbooks: Future Learning Environments for the School, Home and Workplace
Approximate funding level: \$ 184,000.

The CEE seeks to address the problem of educational effectiveness in a bold but very practical way—to *synthesize and produce a new concept for the textbook of tomorrow*: a new form of interactive learning, one that melds the vast power of modern multimedia technology with the latest research in learning strategies and information science. The advantages of computer presentation are so great that we must accept that, in time, textbooks as we presently know them will largely be displaced. The goal of this project is to construct a prototype model which realizes and exhibits the computer's advantages in this area to the greatest possible extent: a hypermedia application that combines course content, instruction, and powerful support utilities in a single integrated delivery environment called ***Papyrus 2***.

1993 The International Arctic Project: Creating a Distance Education Program in Environmental Science
Approximate funding level: \$ 98,000

The International Arctic Project (IAP), over the next four years, will engage students in grades 4 through 12 in an environmental education program that focuses on the Arctic as a laboratory for testing principles of environmental responsibility. It features unique interdisciplinary studies and electronic communication tied to the international dog sled expedition across the Arctic Ocean from Siberia to the North Pole to Alaska. The CEE is assuming leadership in the following areas: managing all computer communications, developing a front-end interface to Internet activities, developing international teleconferences, participating in an evaluation of involved schools, and coordinating/directing the design of software that will be used by all students associated with the project.

1992 - 1993 Design, Development and Use of Information Kiosks
Approximate funding level: \$ 184,000.

The new Wendell W. Wright Education Building opened in August, 1992, housing the School of Education, the Center for Excellence in Education (CEE), and the Education Library. Within its main lobby and second floor area are a set of information kiosks sponsored by AT&T and developed by the staff of the CEE. Kiosks provide information on the building (for example, a graphical staff directory, departmental descriptions, maps and building resources), the campus (for example, arts and entertainment events, computing facilities, and weather information), and worldwide news (for example, CNN and C-SPAN). An Education Library kiosk provides information on the library's resources and interacts with users to provide answers to frequently asked questions. Additional kiosks describe faculty works in progress, such as interactive multimedia projects and a student graphics showcase.

1992

AT&T Presentation Center
Approximate funding level: \$ 121,000.

The AT&T Presentation Center in the Wendell W. Wright Education Building is used to demonstrate to visitors, prospective students, school personnel, faculty and staff new educational technologies being developed and used in the Center for Excellence in Education. A fully equipped presentation room provides facilities for multimedia lectures and demonstrations. In addition, four workstations serve as demonstration computers for software. These workstations also have authoring and graphics tools, a scanner, and similar resource materials that allow visitors to experiment with multimedia creation.

University of Illinois (Total funding level: \$ 6,500,000.)

1975 - 1990

PLATO Corrections Project
Approximate funding level: \$ 4,135,000.

The PLATO Corrections Project was a research and development effort designed to investigate the use of computer-based instruction in correctional institutions. The Law Enforcement Assistance Administration (LEAA), a branch of the U. S. Department of Justice, the Illinois Law Enforcement Commission (ILEC), and the State of Illinois funded the first year of the project. The Illinois Department of Corrections funded classrooms in nine institutions (minimum, medium, and maximum security). About 500 instructional lessons in basic skills and vocational training were available through the PCP curriculum management, evaluation, and communications system (SYS4). The following states adopted the project: Minnesota, Iowa, Arizona, and Texas. Directed a staff of curriculum designers, site managers, evaluators, and programmers; designed instructional lessons in adult basic skills and GED; designed/directed a formative evaluation plan; designed/implemented with staff an instructor training and monitoring program.

1988 - 1990

A Computer-based Approach to Advancing Literacy in Illinois
Illinois State Library
Approximate funding level: \$ 95,000.

A project to use the University of Illinois-developed NovaNET computer-based education network to deliver a mastery-oriented, comprehension-focused literacy program to young adults in libraries, community colleges, high schools, correctional institutions, and drop-out retrieval centers throughout the State of Illinois.

- 1987 - 1990** Illinois Mathematics and Science Academy Project
Approximate funding level: \$ 49,000.
- In this project, students at the Illinois Mathematics and Science Academy (IMSA) in Aurora, Illinois became familiar with the communications features of the NovaNET System. Notesfiles enabled IMSA students to confer with teachers, with each other, and with University High School (Urbana) students. English classes at the high schools critiqued essays; IMSA students initiated a newspaper.
- 1988 - 1989** Library Information Exchange
Approximate funding level: \$ 40,000.
- This project was an investigation to experiment with linking the Illinois State Library, Research and Reference Centers, and other library systems with a number of public libraries for communications, bibliographic access of Illinet Online, and library-related computer-assisted instruction.
- 1987 - 1988** Lincoln Trail Libraries System
Approximate funding level: \$ 66,000.
- The goal of this project was the design of computer-based instructional lessons on reference strategies for library paraprofessionals.
- 1984 - 1986** U. S. Army Engineer School CBE Project
Approximate funding level: \$ 370,000.
- The goal of this project was to design/develop a civil engineering graduate level curriculum in horizontal construction and drainage for Army Corps of Engineer officers at Ft. Belvoir, Virginia. Thirty-three lessons and sophisticated simulations were developed.
- 1979 - 1983** PLATO Job Corps Project
Approximate funding level: \$ 1,500,000.
- The PLATO Job Corps Project (part of the Educational Improvement Effort) was funded by Department of Labor (DOL), Office of Youth Programs. The project's goal was to investigate the feasibility of computerized instruction in the Job Corps. In addition to integrating PLATO with existing educational programs at Clearfield, Utah and Gary, Texas Job Corps Centers, the project focused on development/evaluation of computer-based curriculum materials in reading, language, math, and GED. Directed a professional staff of curriculum designers/programmers; designed instructional materials; participated with DOL to design/carry out an extensive evaluation plan; cooperated in implementing a complete program of PLATO/Job Corps instructional materials.
- 1979 - 1982** Optimization of Computerized Drills
Approximate funding level: \$ 140,000.
- This research project was funded by the Army Research Institute (ARI), Department of Defense. Drill and practice routines are pervasive in education. An important instructional question is how to design an effective and efficient drill - one that minimizes time to mastery and maximizes retention. This question is

especially critical in designing computerized drill programs, for the computer can only behave according to the scheme explicitly provided by the instructional designer. Research goals were: a) to develop a stochastic learning model to use to produce an optimized drill paradigm that reflects sound instructional features; b) to apply the optimized paradigm to drill and practice programs in two different subject areas and measure its effectiveness and efficiency; and c) to produce an “applications manual” for implementing the optimized drill paradigm.

1978 - 1981

Computer-based Instruction for the Severely and Profoundly Developmentally Disabled
Approximate funding level: \$ 55,000.

This research was funded by the Illinois Department of Mental Health and Developmental Disabilities (DMHDD). Educational services were created for the developmentally disabled at the William A. Howe Center, serving adults; and at the Herman Adler Mental Health Center, serving children. Skills addressed included basic preacademic and functional skills important for community living. Since application of computer-assisted instruction to this area was in its infancy, the lessons developed led the way in defining models for using this medium effectively to educate the severely and profoundly disabled.

1976 - 1977

Adult Reading Comprehension Skills Program
Approximate funding level: \$ 45,000.

This project was funded by the Illinois Office of Education, Adult Education Division. The program used computer-based instruction to improve adult literacy; assembled a curriculum of already-available English, math, and vocational lessons; implemented a management system allowing instructors without computer expertise to manage both lessons and students; installed PLATO terminals at Urbana adult education centers; trained center instructors to use the terminals, management system, and lessons; and developed 50 reading comprehension and vocabulary development lessons for adults reading at the intermediate level. The lessons focused on search skills for literal meaning in sentences and short passages; paraphrase and inference skills; and vocabulary acquisition strategies relating meaning to morphological features and grammatical constructions.

Other R&D

1973 - 1975

Specialist in Automated Education, CERL Member, PLATO Educational Evaluation and Research Group. Duties: a) research - designed/carried out research in instructional theory and instructional design; carried out research projects directed toward general evaluation of instructional design and CAI systems implementation and operation; b) service - consultations with PLATO authors in instructional design, evaluation design, test construction, statistical and measurement techniques; extensive assistance to community college math curriculum project and medical sciences group; c) administrative - supervised individual research/service projects; produced internal reports for CERL curriculum groups and laboratory administration.

1971

Designed with CERL staff a system that would teach deaf children and adults *to hear* via tactual patterns; designed and conducted experiments to examine the learning rate for tactile patterns and varying physical parameters that affect the discriminability of various patterns; developed/tested a teaching program

enabling a subject to discriminate similar four-vibrator patterns of 1/30 sec. duration - each vibrator varying with seven possible discrete intensity levels.

**Lectures,
Consulting, and
Reviewing**

I stopped adding this to my CV after 2002. There have been many more talks since then, including invited keynote lectures.

2000 - 2002

St. Louis. Invited speaker at National Park Service conference. Topic: "Information in Place: An Examination of the WorldBoard Project."

Miami. Invited keynote speaker at international conference hosted by DDB. Topic: "Time-Revealed Scenarios for Tacit Knowledge."

1997 - 1999

Austria. Invited keynote address at international conference on learning in digital environments.

University of Virginia. Paper presented by J. Sept and M. Siegel at the Joint International Congress of the Association for Computers and the Humanities and the Association for Literacy and Linguistic Computing, June 9-13 1999. Topic: "A Web-Based Digital Learning Environment for Archaeology Students."

Vancouver, Canada. Invited keynote address at international conference on web-based learning.

Singapore. Invited keynote address at international conference on language learning.

Malaysia. Invited keynote address at international conference on distance education.

Philadelphia. Invited keynote address at national conference on corporate training.

Chicago. Invited speaker at conference on distance learning. NCREL. Topic: "Accelerating Insight through Cases."

Vancouver Island, Canada. Invited address at international conference.

1996

Massachusetts. Consultant to Performance Technologies Associates to design an Intranet system for Liberty Mutual.

Colorado. Invited speaker to the annual conference of the National Association of African American Heritage Preservation (NAAAHP).

New Mexico. Invited to address the Board of Directors of the National Association of African American Heritage Preservation (NAAAHP).

Indiana. Invited keynote speaker to the Greencastle teacher conference on Exploring Technology.

Indiana. Invited keynote speaker to the annual FACET retreat for outstanding Indiana University faculty. Topic: "Inventing the Virtual Textbook."

- 1995** Indiana. Invited moderator for CEE Forum on Technology.
- Illinois. Invited keynote speaker to University of Illinois conference on Information Technologies for Library Systems.
- 1994** Texas. Invited panelist on the live national PBS telecast, "Learning Shock 2000: the Changing Frontier in Education," Dallas. Topic: "The Virtual Textbook."
- Indiana. Invited panelist to speak to the National Telecommunications and Information Administration of the U.S. Department of Commerce, Indianapolis. Topic: "Educational Interactive Systems as part of the National Information Infrastructure."
- Indiana. Invited speaker at IU's Mini University, Bloomington. Topic: "Designing the Textbook of the Future."
- Indiana. Invited panelist on WFIU program "Friday Edition," Indiana University, Bloomington. Topic: "All About the Internet."
- Washington, D.C. Invited speaker to the Eisenhower National Clearinghouse Collaboration Workshop. Topic: "Electronic Publishing and Distribution of Curriculum Materials Over Networks: Prospects and Problems."
- Indiana. Invited keynote speaker at the conference "Information Technology 'What IT Is!'" Kokomo. Topic: "Textbooks of the Future."
- Georgia. Presenter at the Global Village Schools National Conference, Atlanta. Topic: "Design of the Virtual Textbook."
- Washington. Invited keynote speaker to the 21st Century Awards, Seattle. Topic: "Technology as a Learning Tool."
- Washington. Invited speaker to the Economic Development Council of Seattle and King County. Bellevue Community College, Bellevue. Topic: "The Design of Information Learning Environments."
- Indiana. Invited speaker to Carmel Clay Schools, Carmel. Topic: "The Virtual Textbook."
- New Mexico. Consultant to the Los Alamos National Laboratory on the topic of using robotics for teaching about systems thinking.
- New Jersey. Consultant for Prentice Hall, Englewood Cliffs, on the design of *Authorware Academic*.
- Illinois. Consultant to Global Information Systems Technology, Inc., Champaign, on the topic "Re-Usable Instructional Strategy Templates for Highly-Efficient Computer-Based Training Development and Delivery."
- 1993** New Jersey. Invited participant in the AT&T Education Seminar, Bell Laboratories, Holmdel, NJ.
- Washington, D. C. Invited participant to the National Academy of Sciences seminar, "Reinventing Schools: The Technology is Now."

Massachusetts. Speaker at the Tenth International Conference on Technology and Education, MIT. Topic: "Papyrus 2: A New Electronic Textbook Environment."

Indiana. Coordinator of the summer meetings of the World School for Adventure Learning, Indiana University, Bloomington.

Indiana. Convener of conference "Design of a 'Virtual Textbook' in Civics," Indiana University, Bloomington.

Indiana. Invited presenter to the Regional Workshop for College-Level Chinese and Japanese Teachers, Indiana University, Bloomington. Topic: Textbooks of the Future.

Alabama. Invited speaker to the U.S. Space and Rocket Center, Huntsville. Topic: Creating New Learning Environments with Technology.

1991 - 1992

Illinois. Invited banquet speaker: 13th Annual Illinois Adult and Continuing Educators Association (IACEA) Conference, Oak Brook. Topic: Electronic Textbooks

Indiana. Invited speaker: Indianapolis Chapter—National Society for Performance and Instruction (IC-NSPI) meeting. Topic: Research and Development at the Center for Excellence in Education.

Minnesota. Invited speaker: International Arctic Project Symposium on Principles, St. Paul. Topic: Thoughts on Electronic Environments for Arctic Simulation.

Indiana University-related activities: Presenter, Mini-University (topic: Electronic Texts: The Future of the Learning Environment in Public Schools); Member, School of Education Ad Hoc Committee; Substitute Member, Education Policy Council; Member, Search Committee for Director of Teacher Education; Member, Academic Computing Policy Committee; Member, Academic Orientation Advisory Group; Member, Search and Screen Committee for Network Operations Manager in Educational Services; Member, Search Committee for Senior Advisor/Analyst Planner, Office of Information Resources; Member, University Computing Services Instructional Resources Task Force.

1989 - 1990

Georgia. Invited speaker: EDUCOM (Educational Uses of Information Technology) '90 Conference Preparing for the Renaissance: Computing and Communications for Technology, Science, and the Arts, Atlanta.

Illinois. Invited delegate: Illinois Pre-White House Conference on Library and Information Services, Chicago.

Canada. Invited speaker: 45th Annual Conference of the Correctional Educational Association, Vancouver. Topic: "Achieving Adult Literacy with NovaNET Computer-based Education."

Florida. Invited speaker: American Society of Information Science Conference, *Microcomputing in the 1990s: Unlocking the Power*, Ft. Lauderdale. Topic: "Exploring Interactive and Communications Media for Library Staff Training and Information Exchange."

Georgia. Invited speaker: International Reading Association 35th Annual Convention, Atlanta. Theme: International Literacy Year: Celebration, Inspiration, Dedication. Topic: "Achieving Adult Literacy with Computer-Based Education."

Illinois. Invited presenter: Partnerships for Literacy VII Conference, Chicago. Sponsored by the Illinois Literacy Council, Adult Education Section, Office of the Secretary of State. Topic: "Adult Literacy Instruction on the NovaNET Computer-based Education System."

New York. Invited speaker: The Best of American Human Resources Conference and Expo sponsored by Authorware, Inc., New York City. Topic: "Five Powerful Ideas for Designing Effective Courseware: Computer Imagination in Instructional Design."

Washington, D.C. Chairman of session: North American Conference on Adult and Adolescent Literacy sponsored by the International Reading Association. Session topic: "Some Applications Technology in Teaching Practical Skills."

Illinois. Consultant: Caterpillar, Inc., Peoria. Work includes: design of a new instructional model for corporate training; instructional design workshop; critique and redesign of computer/human interfaces for Caterpillar systems.

Illinois. Consultant: Global Information Systems Technology, Inc., Champaign, a computer-based training company working on incorporating artificial intelligence into CBT.

CERL-related activities: Presented PLATO demos for representatives of: Learning Solutions Network, Sacramento, California; Caterpillar, Inc., Peoria, Illinois; Motorola, Inc., Schaumburg, Illinois; Boys Town, Boys Town, Nebraska.

University of Illinois-related activities: Member, University Educational Technologies Board; Member, University High School Advisory Committee; Member, Advisory Committee for the University High School Library; Mentor for students in the University of Illinois Honors Program; Member, Microsoft Internship Committee; Member, CERL Steering Committee; Member, Graduate School of Library and Information Science Admissions and Search Committees.

State of Illinois-related activities: Member, Advisory Board, Illinois Mathematics and Science Academy (IMSA), Aurora. Coordinator: telecommunications network between students at IMSA and University High School, Urbana.

1988 - 1989

Illinois. Selected expert: Interviewed by a committee appointed by the Secretary of State, Springfield. Topic: "Status of illiteracy in the State of Illinois."

Illinois. Consultant: Caterpillar, Inc., Peoria. Work includes: design of a new instructional model for corporate training; instructional design workshop; critique and redesign of computer/human interfaces for Caterpillar systems.

Illinois. Invited speaker: Central Illinois Adult Education, Peoria. Computer-based education for adult literacy.

Colorado. Invited participant: Sixth Forum on Computing Systems for Documentation. National Center for Atmospheric Research, Estes Park.

Massachusetts. Lecturer: University of Massachusetts, Amherst. Discussion of NovaNET with deans of the University.

California. Invited speaker: Learning Solutions Network Conference: Using Technology Today, Irvine. Presented two papers: *The SYS 4 Computer-based Management System* and *Learn to Read to Learn: Achieving Literacy with NovaNET*.

Illinois. Demonstrated NovaNET for librarians at the Waukegan Public Library.

Illinois. Invited speaker: Lincoln Trail Library System Conference.

National. Featured in interview in *Authorware Magazine*, a quarterly publication. Title: "Martin A. Siegel on Uses of the Computer Imagination."

Illinois. Interviewed on television: CBS Channel WCIA, Champaign. Topics: "NovaNET" and "literacy."

Kentucky. Invited speaker: Adult Literacy and Technology Conference, Louisville. Presented paper and 2-hour computer demonstration. Topic: "Learn to Read to Learn: Achieving Adult Literacy with NovaNET Software."

California. Invited speaker: Presented a paper at the American Society for Information Science Mid-Year Conference, San Diego. Topic: "A Graduate Course in the Design of Computer-Human Interfaces."

Illinois. Invited speaker: Addressed the Association for Computing Machinery, Urbana. Topic: "Introduction to Interactive Systems Design: The Design of Computer-Human Interfaces."

Illinois. Interviewed by University of Illinois News Bureau: 15-minute taped segment broadcast on radio stations throughout the State of Illinois. Topic: "literacy."

Arizona. Invited speaker: Compu-Sat of Arizona, Inc., Tucson. Topic: "The Design of *Testing 1-2-3*."

California. Invited speaker: 1989 National Conference, Computers & Reading/Learning Difficulties, San Francisco. Topic: "Learn to Read to Learn: A Computer-based Reading Comprehension Curriculum for Adolescents and Adults."

Illinois. Moderator (two sessions): Sixth Annual Technology in Education Conference, Urbana. "NovaNET: Overview and Demonstration of Instructional Materials for a Low-Cost CBE System."

Illinois. Consultant: Global Information Systems Technology, Inc., Champaign, a computer-based training company working on incorporating artificial intelligence into CBT.

CERL-related activities: Presented PLATO demos for representatives of: Caterpillar Corporation, Peoria IL; Illinois State librarians, Springfield IL; State of Illinois Department of Corrections, Springfield IL; Drake University, Ames IA;

Detroit Edison, Detroit MI; Superintendent of Schools, Urbana IL; California State University, Sacramento CA.

University of Illinois-related activities: Member, University Educational Technologies Board; Member, University High School Advisory Committee; Member, Advisory Committee for the University High School Library; Mentor for students in the University of Illinois Honors Program; Member, Microsoft Internship Committee; Member, CERL Advisory Committee; Member, Graduate School of Library and Information Science Admissions Committee; Participant, College of Education of Tomorrow Project.

State of Illinois-related activities: Member, Advisory Board, Illinois Mathematics and Science Academy (IMSA), Aurora. Coordinator of a telecommunications network between students at IMSA and University High School, Urbana.

1987 - 1988

Georgia. Invited speaker: Planning Workshops for Application of NovaNET Technologies to Dropout and Adult Literacy Programs, Atlanta. Topic: "Courseware and the NovaNET Technology."

Illinois. Speaker: City Colleges of Chicago. Topic: "Latest PLATO Developments for the Adult Basic Learner." Host: Dawson Technical Institute, Chicago.

Washington. Nominated as first Microsoft Corporation Faculty Fellow. Conducted 3-week seminars and consultations in the design of computer-based training and computer-human interfaces. Corporate headquarters, Redmond.

Louisiana. Invited speaker: YASD President's Program, American Library Association 1988 Conference, New Orleans. Topic: "The Future Is Now: Information Technology and Youth Services."

California. Invited keynote speaker: California State University Second Annual PLATO Conference, San Diego. Topic: "The Design of Basic Skills Courseware."

Michigan. Invited moderator/speaker: American Society for Information Science Conference: *Artificial Intelligence: Expert Systems and Other Applications*, Ann Arbor. Topic: "Intelligent Tutoring Systems: Insights from Instructional Design Theory." Session Moderator: "Tools for End User Searching."

Illinois. Conference Director: 25th Annual Clinic on Library Applications of Data Processing: *Design and Evaluation of Computer/Human Interfaces: Issues for Librarians and Information Scientists*, Urbana. Topic: "Architectural and Instructional Worlds: Insights for Interface Design."

Illinois. Lecturer: PLATO demonstration for Illinois State Librarian and staff, Springfield. Illustrated the usefulness of the NovaNET System to facilitate communications among librarians throughout the State of Illinois.

Arizona. Lecturer: The NovaNET Seminars, computer education workshops sponsored by Compu-Sat of Arizona, Tucson and Phoenix.

Arizona. Interviewed on computer-based education by Tucson ABC-TV News.

Republic of China. Conducted a one-week workshop at the Computer Education Center, Tamkang University, Taipei, Taiwan. Evaluated the computer-based education program and students' work.

Illinois. Lecturer: PLATO demonstration for Lincoln Trail Libraries System librarians and staff, Champaign. Developed a proposal to train library staff to answer consumer reference inquiries electronically.

Alabama. Consultant: U.S. Army, Redstone Arsenal, Huntsville on computer-based training in the design of an intelligent tutoring system for the operation of high-tech systems.

National. Bibliographic reviewer: *Higher Education Bibliography Yearbook* (under the entry, Educational Communication and Technology). Contribution: Annual review of state-of-the art; submit citations and articles on books/papers/programs that have the greatest positive impact on the discipline.

Illinois. Consultant: Global Information Systems Technology, Inc., Champaign, a computer-based training company working on incorporating artificial intelligence into CBT.

Illinois. Consultant: Science Research Associates, Inc., Chicago. Developed a manual, *Electronic Ink: An Educational Word Processing System - Teacher's Guide*.

Illinois. Lecturer: University of Illinois course, LIS 304, Urbana. Topic: "Personal Thoughts of a Computer-Based Educator."

CERL-related activities: Conducted PLATO demonstrations for the Secretary of the State of Illinois and officials from: Tamkang University, Taipei, Taiwan; Arthur Anderson Company, Midwest Region; NILROCK, Northern Consortium on Fiber Optics - IL Library Telecommunications Network, Rockford, Illinois.

University of Illinois-related activities: Member, University High School Advisory Committee; Member, Advisory Committee for the University High School Library; Mentor for outstanding freshmen, University of Illinois Honors Program; Member, Microsoft Internship Committee; Member, CERL Executive Committee.

State of Illinois-related activities: Member, Advisory Board, Illinois Mathematics and Science Academy (IMSA), Aurora. Established a telecommunications network between students at IMSA and University High School, Urbana.

1986 - 1987

Washington. Invited lecturer: Microsoft Corporation, Redmond. Topic: "Three Perspectives from an Instructional Designer."

National. Reviewer of British Computer Society Conference Proceedings for the *Bulletin of the American Society for Information Science*.

Illinois. Invited keynote speaker (one session): The Role of the Computer in Education VII Conference, Arlington Heights; panel participant in another session. Paper presented: "Exploiting the Strengths of the Computer for Teaching Math and Reading."

New York. Participant: National Science Foundation-sponsored workshop at New York University, New York, to identify feasible design options for school improvement for the next 10 years; and to identify intermediate technological steps for successful implementation.

Illinois. Lecturer: Computers and Education Round table, University of Illinois, Department of Educational Psychology, Urbana.

Massachusetts. Consultant: Science Research Associates. Demonstrated "Electronic Ink," a computer word processor, for teachers and administrators of the Boston and Milford Public School Systems.

Alabama. Consultant: U.S. Army, Redstone Arsenal, Huntsville, on computer-based training in the operation of high-tech systems.

National. Bibliographic reviewer: *Higher Education Bibliographic Yearbook* (under the entry, Educational Communication and Technology). Contribution: Annually review state-of-the art; submit citations and articles on books/papers/programs that have the greatest positive impact on the discipline.

Illinois. Invited lecturer: West Central Regional Meeting, Association of Collegiate Schools of Architecture, Champaign. Topic: "Computer-based Education in Architectural Design."

Illinois. Consultant: Global Information Systems Technology, Inc., Champaign, a computer-based training company working on incorporating artificial intelligence into CBT.

CERL-related activities: Conducted PLATO demonstrations for officials from: Scott, Foresman & Company; Beijing Polytechnic University, Beijing, Peoples Republic of China; University of Iceland, Reykjavik, Iceland; University of Singapore; Illinois Mathematics and Science Academy, Aurora, Illinois; Center for Educational Computing, Tokyo, Japan; Educational Research Center, Capetown, South Africa; Secretary of State Office, Springfield, Illinois; Sweetwater Union High School District, Chula Vista, California; California State University, Sacramento, California; University of Hawaii, Curriculum Research and Development Science Department; Ivory Coast, Africa Exchange Program.

University of Illinois-related activities: Member, University High School Advisory Committee; Mentor for outstanding freshmen, University of Illinois Honors Program.

State of Illinois-related activities: Member, Advisory Board, Illinois Mathematics and Science Academy, Aurora.

1985 - 1986

National. Interviewed on the PLATO Corrections Project by the CNN News Network. Broadcast nationally.

National. Reviewed papers submitted for publication to two journals: *Computers in Human Behavior* and *American Journal of Mental Deficiencies*.

Nebraska. Invited speaker: Nebraska State Board of Education, Lincoln. Spoke on the topic of computer-based education.

Illinois. Invited speaker: Illinois Mathematics and Science Academy, Aurora. Working conference: "A Student-Centered Interactive and Omnipresent Libraetory."

New York. Invited lecturer: Syracuse University. Topic: "Exploiting the Strengths of the Computer Medium for Educational Gains."

Illinois. Appointed by Dr. Leon Lederman, Director, Fermilab, as member of the Advisory Board, Illinois Mathematics and Science Academy, Aurora.

Illinois. Invited commentator: Seminar Series on Illinois Educational Reform in 1985, Urbana.

Illinois. Seminar leader: conducted seminar on video disk applications in computer-based education for the Center for the Study of Reading, Champaign. Topic: "Designing the Electronic Textbook."

Illinois. Invited lecturer: Demonstrated *Electronic Ink*, a computer-based word processing system, to the staff of Science Research Associates, Inc., Chicago.

North Carolina. Invited workshop leader: conducted a two-day workshop on PLATO and computer-based education at Ravenscroft School, Raleigh.

Republic of China. Invited lecturer: chaired a session at a five-day workshop on computer-based education for Taiwanese educators and scientists, Taipei. Lectured on problem-solving aspects related to designing intelligent computer-based courseware. Invited by the Ministry of Education and the National Science Council of Taiwan.

Illinois. Invited speaker: presented paper at the Annual Meeting of the American Educational Research Association, Chicago.

Illinois. Lecturer: addressed 12 teachers from Japan and three educators from Mainland China. Demonstrated the PLATO System's capabilities and discussed computer-based lessons, Urbana.

Ohio. Invited speaker: addressed computer educators at a conference sponsored by the Hamilton County, Ohio Office of Education, Cincinnati. Topic: "Understanding Computer-based Education."

Illinois. Invited lecturer: conducted a session on Computer-based Reading Comprehension at the Winter Conference, Champaign, Illinois Community Schools.

Illinois. Invited lecturer: presented a lecture on computer-based education to the Rantoul, Illinois City Schools Teachers' Institute.

Iowa. Delivered a one-hour telenetwork lecture to the Iowa Deans and Directors Association. Educators at 18 community college sites throughout the State of Iowa participated in the teleconference. Topics: The PLATO System and computer-assisted instruction.

Florida. Educational consultant: Florida State University Center for Educational Technology, Tallahassee, which was developing a large-scale basic skills

curriculum for the U.S. Army. Observed computer-based lessons at the Center for two days. Suggested improvements and wrote critique of the program.

CERL-related activities: Conducted PLATO demonstrations for officials from: Private Industry Council, Akron, Ohio; Education Department, Victoria Australia; Moraine Valley Community College, Palos Hills, Illinois.

University of Illinois-related activities: Included in (Incomplete) List of Excellent Teachers - U of I newspaper; Member, University High School Advisory Committee; Participant, 7th Session of the College of Education/ISBE Seminar Series on Illinois Educational Reform in 1985.

1984 - 1985

Illinois. Invited speaker: addressed staff of South High School, Hinsdale on computer-based education.

Illinois. Invited lecturer: conducted a session on Computer-based Reading Comprehension at the Winter Conference, Champaign, Illinois Community Schools.

Virginia. Invited lecturer: presentation on PLATO System and computer-based education for officers at the Army Corps of Engineer School, Fort Belvoir.

CERL-related activities: Conducted PLATO demonstrations for officials from: Employment Resources, Inc., Cambridge, Massachusetts; Ministry of Education, Rehovot, Israel; Gary Job Corps Center, San Marcos, Texas; OIC Office of Muskegon, Michigan; University of Western Ontario, Ontario, Canada; Computing Services Office, Springfield, Illinois.

University-related activities: Participant, University Select Conference on Public Policy; Member, University High School Advisory Committee.

1970 - 1984

Colorado. Invited lecturer and chairman: workshop session, International Conference of the Association for the Development of Computer-based Instructional Systems, Denver.

Illinois. Invited speaker and reading consultant: Seminar on Basic Skills, Illinois Office of Education, Springfield.

Ohio. Invited speaker: conference for public officials and educators, Cincinnati.

Illinois. Invited lecturer: Department of Corrections Conference, Southern Illinois University, Carbondale.

Illinois. Invited lecturer: Northern Institute, Joliet.

Illinois: Lecturer: presented PLATO demonstration and lectured on computer-based education at the Federal Prison, Chicago.

CERL-related activities: Conducted PLATO demonstrations for officials from: Scallop Corporation, The Netherlands; Ford Foundation, New York, New York; U. S. Department of Labor, Washington, D.C.; Cincinnati Public Schools, Cincinnati, Ohio; King Saud University, Rijahad, Arabia.

Illinois. For Science Research Associates, Chicago, co-developed a national competency-based teacher preservice/in-service program for the Distar Instructional System; developed a training-of-teacher-trainers program.

Arkansas. Invited speaker: seminar on "Implementation of Follow-Through Models." Arkansas State Teachers College, Conway.

Mississippi. Teacher: taught four-week summer school course at Mississippi State University, Mississippi State, on development of curriculum programs for educationally disadvantaged students.

South Carolina. Teacher: taught a three-week seminar at University of South Carolina, Columbia, on behavior modification and techniques of teaching reading/language arts.

Illinois. Educational consultant: Illinois Community Schools, Danville. Coordinator and teacher trainer of kindergarten and primary-grade classrooms employing Distar programs, a direct instructional reading/language/math program for educationally disadvantaged preschool/primary grade children.

Illinois. Educational consultant: Illinois Community Schools. Developed reading, language, and math programs for EMH students; coordinated teacher training program for special education teachers, Urbana.

U. S. and Guam. Educational consultant: Science Research Associates. Trained local teacher supervisors/teachers in implementation phases of Distar Instructional System in Hawaii, Guam, California, Utah, Texas, Wisconsin, Illinois, Michigan, New York, Massachusetts, South Carolina, Florida, Colorado, Alabama, Mississippi, Arkansas, and Oklahoma.

Professional Society Memberships

American Educational Research Association (AERA)
American Institute of Graphic Arts (AIGA)
Association for Computing Machinery (ACM)
Special Interest Group — Computer and Human Interaction (SIGCHI)

Awards and Honors

First Microsoft Corporation Faculty Fellow
July 1, 1988
Microsoft Corporation
Redmond, Washington

Graduate Student Association Award for Outstanding Teaching
and Advising of Graduate Students
University of Illinois
May, 1990

TERRA Award for Outstanding Teaching
Indiana University

May, 1998

Indiana University Trustees Award for Outstanding Teaching
2010, 2015, 2018

Awards of my students:

During a five-year period when I mostly directed the HCI/d master's program, I coached HCI Design teams from among our master's students to compete in the very prestigious International Student Design Competition sponsored by ACM's SIGCHI. Each year our teams placed in the top three slots among many international entries.

**Publications:
Books and
Papers**

- 2019** Siegel, M., & Fath, E. Bridging Cognitive Bias Gaps within Interdisciplinary Product Teams. In Murdoch-Kitt, K., & Sosa-Tzec, O. (2019). *Decipher*, Vol. 1. <https://doi.org/10.3998/mpub.11688977> (pp. 127-134).
- 2018** Stuart Reeves, Sara Ljungblad, Elizabeth Buie, Torkil Clemmensen, Susan Dray, Rowanne Fleck, Colin M. Gray, Keith Instone, Carine Lallemand, Gitte Lindgaard, Andrea Resmini, Marty Siegel, Simone Stumpf, Raphael Velt, and Selena Whitehead. Proceedings of the Nottingham Symposium on Connecting HCI and UX. Technical report, University of Nottingham, 2018. DOI: 10.17639/8vez-c741
- Siegel, M. A. (2018). The Design of Designers: Becoming Competent and Confident in an Ever-Changing Context. In *Proceedings of the 2018 AECT Summer Research Symposium*. AECT.
- Siegel, M. A. (2018). From Sprint to Deep Strategy: Responding to Shifting Design Goals. In *Proceedings of the 2018 College Art Association Annual Conference*. CAA
- 2016** Siegel, M. A. (2016). 6 The Rapid (Interactive) Design Studio for Slow (User and Learner) Change. *Studio Teaching in Higher Education: Selected Design Cases*, 73.
- Hunsucker, A. J., Gobbo, D., Stallings, M., & Siegel, M. A. (2016, May). The Panda Hat of Doom. In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems* (pp. 647-654). ACM.
- 2015** Sosa-Tzec, O., Stolterman, E., & Siegel, M. A. (2015, August). Gaza Everywhere: exploring the applicability of a rhetorical lens in HCI. In *Proceedings of The Fifth Decennial Aarhus Conference on Critical Alternatives* (pp. 69-72). Aarhus University Press.
- Omar, S. T., Siegel, M. A., & Brown, P. (2015). Exploration of Rhetorical Appeals, Operations and Figures in UI/UX Design. In *Proceedings of the 3rd International Conference for Design Education Researchers* (p. 1432).

Hunsucker, A. J., & Siegel, M. A. (2015). Once Upon a Time: Storytelling in the Design Process. In *Proceedings of the 3rd International Conference for Design Education Researchers* (p. 443).

2014

Siegel, M. A., & Beck, J. (2014). Slow change interaction design. *Interactions* 21(1): 28-35. [cover article]

Sosa-Tzec, O., & Siegel, M.A. (2014). Rhetorical evaluation of user interfaces. In *Proceedings of 2014 NordiCHI*. Finland: ACM Press.

Gray, C. M. & Siegel, M. A. (2014). Sketching design thinking: Representations of design in education and practice. *Design and Technology Education*, 19(1), 48-61.

Gray, C. M., Stolterman, E., & Siegel, M. A. (2014, June). Reprioritizing the Relationship Between HCI Research and Practice: Bubble-Up and Trickle-Down Effects. In *DIS'14: Proceedings of the 2014 CHI Conference on Designing Interactive Systems*. New York, NY: ACM Press. [Awarded Best Paper, top 1%].

Boling, E., Siegel, M., Smith, K.M. & Parrish, P. (2014). Student goes on a journey; Stranger rides into to the classroom: Narratives and the instructor in the design studio. *Art, Design, and Communication in Higher Education*; Special Issue in Narrative, Communication and Pedagogy.

2013

Gray, C. M. & Siegel, M. A. (2013). Sketching design thinking: Representations of design in education and practice. Full paper to be presented at Design Research Society Cumulus, Oslo, Norway.

Sosa Tzec, O., Beck, J. E., Siegel, M. A. (2013). Building the narrative cloud: Reflection and distributed cognition in a design studio classroom. Full paper to be presented at Design Research Society Cumulus, Oslo, Norway.

Boling, E., Smith, K., Siegel, M. A., Parrish, P. E. (2013). Student goes on a journey; stranger rides into the classroom: Narratives and the instructor in the design studio. Full paper to be presented at Design Research Society Cumulus, Oslo, Norway.

Gray, C. M., Stolterman, E., Siegel, M. A. (in review). Trickle-down and bubble-up: Relationships between HCI theory and practice. Submitted to Nordes 2013, Copenhagen, Denmark/Malmö, Sweden.

Siegel, M. A. (2013). Rapid design for slow change: A case study of graduate studio interaction design. In E. Boling, R. Schwier, K. Campbell, K. M. Smith, C. Gray (Eds.), *Teaching in the studio*. Cambridge, MA: MIT Press.

2011

Stolterman, E., Siegel, M., Ryan, W., Jung, H., & Stroman, T. (2011). Device landscapes: A new challenge to HCI research. Submitted to *Interacting with Computers*.

2009

Ryan, W & Siegel, M. A. (2009). Evaluating interactive entertainment using breakdown: understanding embodied learning in video games. In *Proceedings of*

the Digital Games Research Association (DiGRA), Breaking new ground: innovation in games, play, practice and theory, West London, UK, 1-4 September 2009.

Ryan, W., Stolterman, E., Jung, H., Siegel, M., Thompson, T. & Hazlewood, W. R. (2009). Device Ecology Mapper: A Tool for Studying Users' Ecosystems of Interactive Artifacts. In Proceedings of CHI 2009, ACM, Boston, 6-9 April, 2009. (Poster)

2008

Siegel, M. A & Stolterman, E. (2008). Metamorphosis: transforming non-designers into designers. Proceedings of DRS2008, Design Research Society Biennial Conference, Sheffield, UK, 16-19 July 2008.

Jung, H., Stolterman, E., Ryan, W., Thompson, T. & Siegel, M. (2008). Toward a framework for an ecology of artifacts: how are digital artifacts interconnected within a personal life. In Proceedings of the Nordic Conference on Human-Computer Interaction, ACM, 20-22 October, 2008.

2007

Siegel, M. A. (2007). Studio as an instructional affordance. In Blevis, E., Lim, Y., Stolterman, E., Wolf, T. V., & Sato, K. Workshop on Supporting Design Studio Culture in HCI. ACM CHI 2007 conference on Human Factors and Computing Systems, San Jose, CA (4 pages).

Siegel, M. A., & Stolterman, E. (2007). Metamorphosis: Transforming non-designers into designers. In Design Research Society Biennial Conference, Sheffield, England, July 16-19, 2008.

2006

Siegel, M. A., & Clapp, S. E. (2006). *The E-Mail Diet Book*. Fort Wayne: LifeQuest Publishing.

2005

Blevis, E., & Siegel M. (2005). The explanation for design explanations. In 11th International Conference on Human-Computer Interaction: Interaction Design Education and Research: Current and Future Trends, Las Vegas, NV.

Siegel, M. A. Developing tacit knowledge through deep conversation. In First International Conference on Online Communities and Social Computing at HCI International 2005, Las Vegas, NV, July 22-25, 2005.

Siegel, M. A. Interactive narrative tools to generate insight within a collaborative work team. In First International Conference on Online Communities and Social Computing at HCI International 2005, Las Vegas, NV, July 22-25, 2005.

Siegel, M. & Blevis, E. (2005). HCI design graduate program at the School of Informatics, Indiana University." In Foley, J., Beaudouin-Lafon, M., Grudin, J., Hudson, S., Hollan, J., Olson, J., & Verplank, B. Workshop on Graduate Education in Human-Computer Interaction. ACM CHI 2005 Conference on Human Factors and Computing Systems, Portland, OR. (4 pages).
<http://hcc.cc.gatech.edu/chi2005workshop.htm>

2004

Blevis, E., Rogers, Y, Siegel, M., Hazlewood, W, Stephano, A. (2004). Integrating HCI and design: HCI/d at IUB, a design education case story. In Zimmerman, J., Evenson, S., Baumann, K., & Purgathofer, P.

Workshop on the relationship between design and HCI. ACM CHI 2004 conference on Human factors and computing systems, Vienna, Austria.

Siegel, M.A., Ellis, S. E., & Lewis, M. B. (2004). Designing for deep conversation in a scenarios-based e-learning environment. *Proceedings of the 37th Hawaii International Conference on System Sciences*.

- 2002** Siegel, M. A. (2002). The future of education. Chapter in A. Zolli, Andrew (Ed.) *Catalog of Tomorrow: Trends Shaping Your Future*. Que Publisher.
- Sept, J., & Siegel, M. A. (in press). A web-based digital learning environment for archaeology students. In a special issue of *Computers and the Humanities*. J. Unsworth, E. Mylonas, & L. Hunyadi (Eds.)
- 2001** Kelly, T. and Siegel, M. A. (2001). *E-Learning* [working title]. Cisco Press.
- 1999** Siegel, M. A. (1999). Computer-imaginative tools for the design of digital learning environments. Chapter in C. Wards and W. A. Renandya (Eds.) *Language teaching: New insights for the language teacher*.
- 1998** Siegel, M. A., Kirkley, S., Bean, M., Jensen, J., Dirksen, J., & Graham, C. (1998). Time-revealed scenarios: Changing how organizations learn. Chapter in B. H. Khan (Ed.) *Web-based training: Development, application, and evaluation*. Englewood Cliffs, NJ: Educational Technology Publications.
- Siegel, M. A. (1998). Internet-based tools for distributed undergraduate education. Keynote address at the Indiana Conference on Computer Technologies, Fort Wayne, Indiana.
- Siegel, M. A. (1998). Computer imaginative tools for the design of digital learning environments. Keynote address at the International Language Association, Singapore.
- Siegel, M. A. (1998). Collaborative learning: Using technology to support learning. Keynote addressed at ITCA'98 (International Telecommunications Conference), Philadelphia, PA
- Siegel, M. A., & Kirkley, S. (1998). Adventure learning. Chapter in C. J. Bonk & King, K. *Electronic collaborators: Researching the discourse of learner-centered technologies*. Lawrence Erlbaum
- 1997** Siegel, M. A., & Kirkley, S. (1997). Moving toward the digital learning environment: the future of web-based instruction. Chapter in B. H. Khan (Ed.) *Web-based instruction: Development, application, and evaluation*. Englewood Cliffs, NJ: Educational Technology Publications.
- Siegel, M. A. (1997). Creating the digital learning environment: WisdomTools for quality distance education. Keynote address at the International Conference on Distance Education, Kuala Lumpur, Malaysia.
- 1996** Siegel, M. A. (September, 1996). Moving toward a digital learning environment. *Research & Creative Activity*. Bloomington, IN: Indiana University.

- Siegel, M. A. (Ed.). (September, 1996). *Multimedia. Research & Creative Activity*. Bloomington, IN: Indiana University.
- 1995** Siegel, M. A. (1995). From content-centered to problem-centered design: the need for information-processing and critical thinking skills. In B. Seels (Ed.), *Instructional Design Fundamentals: A Reconsideration*. Englewood Cliffs, NJ: Educational Technology Publications.
- 1994** Siegel, M. A. (Ed.). (September, 1994). Special issue on electronic publishing, *Educational Technology*, 34 (7).
- Siegel, M. A. (Ed.). (September, 1994). Electronic publishing: Introduction to this issue. *Educational Technology*, 34 (7), 5.
- Siegel, M. A., & Sousa, G. A.. (September, 1994). Inventing the virtual textbook: Changing the nature of schooling. *Educational Technology*, 34 (7), 49-54.
- Siegel, M. A. (1994). *Design of the Virtual Textbook*. Paper presented at the Global Village Schools National Conference, Atlanta, Georgia.
- Siegel, M. A. (1994). *Electronic Publishing and Distribution of Curriculum Materials Over Networks: Prospects and Problems*. Invited paper to the Eisenhower National Clearinghouse Collaboration Workshop, Washington, D.C.
- Siegel, M. A. (1994). *Technology as a Learning Tool*. Invited keynote paper to the 21st Century Awards, Seattle, Washington.
- 1993** Siegel, M. A. (1993, Fall). The Virtual Textbook. *Television, Technology and Teaching*, p. 14.
- 1991** Siegel, M. A. (1991). Architectural and instructional worlds: Insights for interface design. In Siegel, M. A. (Ed.), *Design and evaluation of computer/human interfaces: Issues for librarians and information scientists*. Urbana, IL: University of Illinois, Graduate School of Library and Information Science.
- Siegel, M. A. (Ed.) (1991). *Design and evaluation of computer/human interfaces: Issues for librarians and information scientists*. Urbana, IL: University of Illinois, Graduate School of Library and Information Science.
- Siegel, M.A. (1991). Learning Management Systems. *Authorware Magazine*, 3(4), 19-21.
- Siegel, M. A. (1991). In search of the big concept. *Authorware Magazine*, 3 (2), 12-14.
- Siegel, M. A. (1991). *Methodology for the design and development of multimedia learning, reference, and performance support systems*. (Unpublished paper). Minneapolis, MN: Authorware, Inc.
- 1990** Sfondilias, J. S., & Siegel, M. A. (1990, Autumn). Combining discovery and direct instruction strategies in computer-based teaching of mathematical problem solving. *Journal of Computer-Based Instruction*, Autumn 1990, 17(4), 130-134.

Siegel, M. A. (1990). *Exploring interactive and communications media for library staff training and information exchange*. Paper presented at the American Society for Information Science Mid-Year Conference, Ft. Lauderdale, FL.

Siegel, M. A. (1990). *Achieving adult literacy with computer-based education*. Paper presented at the International Reading Association 35th Annual Convention, Atlanta, GA.

Siegel, M. A. (1990). *Adult literacy instruction on the NovaNET computer-based education system*. Invited paper presented at the Partnerships for Literacy VII Conference, Chicago, IL.

Siegel, M. A. (1990). *Five powerful ideas for the design of effective training courseware*. Invited paper presented at the Best of America Human Resources Conference and Expo, New York, NY.

1989

Siegel, M. A., & Edwards, E. A. (1989). *Learn to read to learn: Achieving adult literacy with NovaNet software*. Paper presented at the Adult Literacy and Technology Conference, Louisville, KY.

Siegel, M. A. (1989). *A graduate course in the design of computer-human interfaces*. Paper presented at the American Society for Information Science Mid-Year Conference, San Diego, CA.

Siegel, M. A. (1989). *The design of Testing 1-2-3*. Paper presented at the Compu-Sat NovaNET National Conference, Phoenix, AZ.

Siegel, M. A. (1989). *Learn to read to learn: A computer-based reading comprehension curriculum for adolescents and adults*. Paper presented to the 1989 National Conference, Computers and Reading/Learning Difficulties, San Francisco, CA.

Siegel, M. A., & Felty, J. M. (1989). *Electronic ink: An educational word processing system for the Apple Ile and Iic: Teacher's guide*. Chicago, IL: Science Research Associates, Inc.

1988

Siegel, M. A. (1988). *The future is now: Information technology and youth services*. Paper presented at the 1988 American Library Association Conference, New Orleans, LA.

Siegel, M. A. (1988). *The design of basic skills courseware*. Paper presented at the California State University Second Annual PLATO Conference, San Diego, CA.

Siegel, M. A. (1988). *Intelligent tutoring systems: Insights from instructional design theory*. Paper presented at the American Society for Information Science Conference: Artificial Intelligence: Expert Systems and Other Applications, Ann Arbor, MI.

Siegel, M. A., Ely, D., & Hall, K. A. (1988). Academic and institutional computing and communications. In K. Halstead (Ed.), *Higher Education Bibliography Yearbook, 1988*. Washington, DC: Research Associates of Washington.

Siegel, M. A., & Felty, J. M. (1988). *Electronic ink: An educational word processing system: Teacher's guide*. Chicago, IL: Science Research Associates, Inc.

1987

Selby, R. I., Edwards, E. A., Anderson, J. R., Andrejasich, M. J., Gan, K., & Siegel, M. A. (1987). Computer-based education: An opportunity for environment-behavior educators. In *Proceedings of the 18th Annual Conference of the Environmental Design Research Association*, Ottawa, Canada.

Sfondilias, J., & Siegel, M. A. (1987). The instructional calculus and direct instruction in intelligent tutoring systems. In *Proceedings of the Training Applications Using Expert Systems Conference*. Augusta, GA: The National Science Center for Communications and Electronics (NSCCE).

Siegel, M. A. (1987, May). *Achieving literacy in Illinois*. (Unpublished paper). Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A. (1987, February). Exploiting the strengths of the computer for teaching math and reading. In *Proceedings of the Seventh Annual Conference: The Role of the Computer in Education* (pp. 180-185). Glenview, IL: Micro Ideas, 2701 Central Road.

Siegel, M. A., & Davis, D. M. (1987). Redefining a basic CAI technique to teach reading comprehension. In D. Reinking (Ed.), *Computers and Reading: Issues for Theory and Practice* (pp. 111-126). New York: Teachers College Press.

Siegel, M. A., Ely, D., & Hall, K. A. (1987, May). Academic and institutional computing and communications. In K. Halstead (Ed.), *Higher Education Bibliography Yearbook, 1987* (pp. 179-190). Washington, DC: Research Associates of Washington.

1986

Anderson, J. R., Andrejasich, M. J., Edwards, E. A., Selby, R. I., & Siegel, M. A. (1986). Computer-based education in architectural design. In J. Warfield (Ed.), *Fostering creativity in architectural education: Proceedings of the 1986 ACSA West Central Regional Conference* (pp. 233-237). Urbana, IL: University of Illinois, School of Architecture.

Siegel, M. A., & Davis, D. M. (1986). *Turtles, spiders, and globs: Evaluating Logo*. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., & Davis, D. M. (1986). *Understanding computer-based education*. New York: Random House.

Silver, D. Z., & Siegel, M. A. (1986, August). *Basic skills lessons for middle school, high school, and adult basic education students*. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

1985

Edwards, E. A., & Siegel, M. A. (1985, April). *Teaching generalizations using a computer-based drill strategy*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

- 1984 Siegel, M. A., & Misselt, A. L. (1984). An adaptive feedback and review paradigm for computer-based drills. *Journal of Educational Psychology*, 76(2).
- 1983 Dixon, R. C., & Siegel, M. A. (1983, Spring). A review of "Theory of instruction: Principles and applications" by S. Engelmann and D. Carnine. *Direct Instruction News*, 2(3).
- Siegel, M. A., & Davis, D. M. (1983, May). *The PCP SYS IV Management System: Educational overview* (CERL Report E- 27). Urbana, IL: University of Illinois, Computer-based Education Research Laboratory. Paper presented at the annual meeting of the Association for the Development of Computer-based Instructional Systems, Denver, CO.
- Alessi, S. M., Siegel, M. A., Silver, D., & Barnes, H. (1982-83). The effectiveness of a computer-based reading comprehension program for adults. *Journal of Educational Technology Systems*, 11(1), 43-57.
- 1982 DiBello, L. V., & Siegel, M. A. (1982). *Optimizing the performance of computerized drills project report: Executive summary*. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.
- Dixon, R. C., & Siegel, M. A. (1982, Summer). Direct instruction on line. *Direct Instruction News*, 1(4), 1; 13.
- Siegel, M. A. (1982). *Experimental computerized drill studies*. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.
- Siegel, M. A., & Shultz, E. J. (1982). *The development of PLATO computer-based instruction for the severely and profoundly developmentally disabled* (CERL Report E-22). Urbana, IL: University of Illinois, Computer-based Education Research Laboratory. (ERIC Document Reproduction Service No. ED 217 664)
- 1981 Siegel, M. A. (1981, January). *Computer-based education for high school equivalency preparation: An effective tool for army education*. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.
- 1980 Alessi, S. M., Siegel, M. A., Bruner, E. C., & Braune, R. J. (1980, January). *PLATO instructor's handbook for SYS III* (CERL Report E-10). Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.
- Siegel, M. A. (1980, October). *The design of instruction using computers*. Paper presented at the Army Continuing Education System Conference: Quality through Management, Myrtle Beach, SC.
- Siegel, M. A. (1980, May). *Fundamentals of instructional sequencing: communicating through examples*. Paper presented at the Association for Behavior Analysis, Dearborn, MI.
- Siegel, M. A. (1980, April). *PLATO computer-based instruction in reading comprehension*. Paper presented at the annual meeting of the American Educational Research Association, Boston, MA.

Siegel, M. A. (1980, January). *Computer-based education: An overview*. Paper presented at the Chaminade University and the University of Hawaii Symposium on Computer-based Education, Honolulu, HI.

Siegel, M. A. (1980, January). *Instructional design of computer-based programs*. Paper presented at the Chaminade University and the University of Hawaii Symposium on Computer-based Education, Honolulu, HI.

Siegel, M. A. (1980, January). *PLATO computer-based education in non-traditional settings*. Paper presented at the Chaminade University and the University of Hawaii Symposium on Computer-based Education, Honolulu, HI.

Siegel, M. A., & DiBello, L. V. (1980, September). *PLATO computer-based education for the Job Corps* (Project report for year one, May 1, 1979-April 30, 1980). Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., & DiBello, L. V. (1980, April). *Optimization of computerized drills: An instructional approach* (CERL Report E-16). Urbana, IL: University of Illinois, Computer-based Education Research Laboratory. Paper presented at the annual meeting of the American Educational Research Association, Boston, MA.

1979

DiBello, L. V., & Siegel, M. A. (1979, November). *Narrative summary and sample data for the Clearfield PLATO site*. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A. (1979, January). *Teacher's guide to the PCP reading comprehension program for adolescent and adult learners* (CERL Report E-3). Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., & Simutis, Z. M. (1979, February). *CAI for adult basic skills training: Two applications*. Paper presented at the Association for the Development of Computer-based Instructional Systems Conference, San Diego, CA.

Alessi, S. M., Siegel, M. A., & Bruner E. C. (1979, April). *PLATO instructor's handbook for SYS III* (CERL Report E-6). Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

1978

Siegel, M. A. (1978-79). Computer-based education in prison schools. *Journal of Educational Technology Systems*, 7(3), 239-256.

Siegel, M. A. (1978, February). *A computerized basic skills curriculum for prisoners*. Paper presented at the Conference of the Society for Applied Learning Technology, Orlando, FL.

Siegel, M. A., Bruner, E. C., & Alessi, S. M. (1978). *PLATO instructor's handbook for the PCP system* (CERL Report E-2). Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., DiBello, L. V., Bruner, E. C., & Felty, J. M. (1978, April). *Reading comprehension for adults*. Paper presented at the International Reading Association, Houston, TX.

Siegel, M. A., Gilpin, M. O., Bruner, E. C., DiBello, L. V., Felty, J. M., Halvorsen, T. M., & Gilpin, J. B. (1978, January-February). PLATO: computer-based education for corrections. *American Journal of Correction*, 40(1), 6-7; 34; 37.

1977

Siegel, M. A. (1977). Teacher behaviors and curriculum packages: Implications for research and teacher education. In L. Rubin (Ed.), *Curriculum handbook: Administration and theory*. Boston: Allyn & Bacon Publishers. (ERIC Document Reproduction Service No. ED 134 932)

Siegel, M. A., Becker, R. R., & Gilpin, M. O. (1977). *Adult reading comprehension skills: A computer-based instructional program* (Final report). Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Bruner, E. C., DiBello, L. V., & Gilpin, M. O. (1977). *Executive summary - The PLATO Corrections Project: Computer-based education for adult inmates* (First year report). Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Bruner, E. C., DiBello, L. V., & Gilpin, M. O. (1977). *The PLATO Corrections Project: Computer-based education for adult inmates* (First year report). Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Gilpin, M. O., DiBello, L. M., & Bruner, E. C. (1977, July). *The PLATO Corrections Project: Computer-based education for adult inmates*. Paper presented at the Correctional Education Association International Conference, Houston, TX.

1976

Siegel, M. A., Bruner, E. C., & Alessi, S. M. (1976). *PLATO instructor's handbook*. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., & Misselt, A. L. (1976). *An adaptive feedback and criterion teaching paradigm for CAI drill*. Unpublished report, University of Illinois, Computer-based Education Research Laboratory, Urbana, IL.

1975

Siegel, M. A., Misselt, A. L., & Rosenshine, B. (1975). *Teacher behavior and student achievement in the DISTAR instructional system: A summary of correlational research*. Paper presented at the annual meeting of the American Educational Research Association, Washington, DC.

1974

Siegel, M. A. (1974, April). *Teacher behavior and student achievement in the Engelmann-Becker Follow-Through Model: Some experimental findings*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Siegel, M. A. (Ed.). (In press). *Design and evaluation of computer/human interfaces: Issues for librarians and information scientists*. Urbana, IL: University of Illinois, Graduate School of Library and Information Science.

1973

Siegel, M. A. (1973). *An experimental investigation of teacher behavior and student achievement in the DISTAR instructional system*. (Doctoral dissertation, University of Illinois.)

- 1972 Siegel, M. A. (1972). *The relationship between teacher behaviors stressed during training and student outcomes within a curriculum materials package*. (Master's thesis, University of Illinois.)
- Siegel, M. A., & Rosenshine, B. (1972). Teacher behavior and student achievement in the DISTAR program. *Chicago Principals Reporter*, 62, 24-28.
- 1970 Siegel, M. A. (1970). Analyzing mistakes. In Science Research Associates, *Distar Orientation: Participants' manual*. Chicago, IL: Science Research Associates, Inc.
- Other Creative Works: Applications Software**
- 2003 - 2008 WisdomTools Product Development Team (M. A. Siegel, Lead Designer). (2003-2008). *WisdomTools Scenarios*, v 3-6. Bloomington, IN: WisdomTools, Inc.
- 2002 WisdomTools Product Development Team (M. A. Siegel, Chief Learning Officer). (2002). *WisdomTools ScenarioStudio*, v 1.0. Bloomington, IN: WisdomTools, Inc.
- Siegel, A. M., & Siegel, M. A. (2002). *iTutor*, v. 1.0. Chicago, IL: Accenture.
- WisdomTools Product Development Team (M. A. Siegel, Chief Learning Officer). (2002). *WisdomTools Scenarios*, v 2.6. Bloomington, IN: WisdomTools, Inc.
- 1999 - 2001 WisdomTools Product Development Team (M. A. Siegel, Chief Technology Officer and Chief Learning Officer). (1999, 2000, 2001). *Time-Revealed Scenarios*. Bloomington, IN: WisdomTools, Inc.
- 1998 WisdomTools Group (M. A. Siegel, Director). (1998). *PracticeWeb*. Bloomington, IN: Indiana University, Center for Excellence in Education.
- WisdomTools Group (M. A. Siegel, Director). (1998). *Scenario Space*. Bloomington, IN: Indiana University, Center for Excellence in Education.
- 1997 WisdomTools Group (M. A. Siegel, Director). (1997). *Time-Revealed Scenarios*. Bloomington, IN: Indiana University, Center for Excellence in Education.
- 1996 WisdomTools Group (M. A. Siegel, Director). (1996). *TimeWeb*. Bloomington, IN: Indiana University, Center for Excellence in Education.
- 1992 Siegel, M. A., & Sousa, G. (1992) *Electronic Kiosks: School of Education Building Atrium*. Bloomington, IN: Indiana University, Center for Excellence in Education.
- 1989 Felty, J. M., Liu, A. C., Edwards, E. A., Gilpin, J. B., Silver, D. Z., & Siegel, M. A. (1989). *Testing 1-2-3: Test development and delivery system*. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., & Felty, J. M. (1989). *Electronic ink: An educational word processing system for the Apple Ile and IIC*. Chicago, IL: Science Research Associates, Inc.

1988 Siegel, M. A., & Felty, J. M. (1988). *Electronic ink: An educational word processing system for the IBM*. Chicago, IL: Science Research Associates, Inc.

1987 Siegel, M. A., & Felty, J. M. (1987). *Electronic ink: An educational word processing system* [Computer-based instructional program]. Chicago, IL: Science Research Associates, Inc.

1976 Siegel, M. A., & PCP Staff. (1976, 1977, 1978, 1982). *SYS 4*. [Computer-based instructional management system]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

SYS 4 is an ensemble of PLATO software programs which, together with a large corpus of courseware, allows instructors to provide Computer-Managed Instruction to their students. Together, the 40+ SYS 4 programs comprise well over 100,000 lines of computer source code. This system and its predecessors have been used by the Illinois Department of Corrections since 1976 to provide some 17,000 students with about 500,000 hours of instruction. Students who complete the Reading, Math, Spelling, and Language curricula delivered via SYS 4 increase their standardized test results in the respective areas by about 1.3, 1.7, 1.6, and 2.5 grade levels, respectively, after having spent a median time in PLATO lessons of less than 10 hours for Spelling and less than 20 hours for each of the other curricula. In addition to Department of Corrections, SYS 4 has been used by various public schools, by the Job Corps, and by units of the City Colleges of Chicago to provide instruction to more than 11,000 additional students. More recently, major implementations of SYS 4 are underway in the states of California, Arizona, Iowa, Texas, Maine, and Massachusetts.

**Other
Creative
Works:
Courseware**

Most of these lessons, developed on the PLATO Computer-based Education System, are in basic skills for adolescent and adult populations: reading comprehension, language arts, and math. An elaborate computerized management system, SYS 4, and testing system, Testing 1-2-3, have been developed to manage the curriculum materials. More recent work includes the development of curriculum materials for microcomputer workstations.

1990 Siegel, M. A., Edwards, E. A., Liu, A. C., & Keklikian, J. (1990). *Learn to read to learn: What word?* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory. (180 lessons)

1989 Siegel, M. A., Reichmann, L. P., Baker, A. S., Marcovitz, D. M., Miller, J. D., Keklikian, J. D., & Liu, A. C. (1989). *Earth science: Climate and weather* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Baker, A. S., Marcovitz, D. M., Miller, J. D., Keklikian, J. D., & Liu, A. C. (1989). *Earth science: Clouds and atmosphere* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Baker, A. S., Marcovitz, D. M., Miller, J. D., Keklikian, J. D., & Liu, A. C. (1989). *Earth science: The changing earth* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Baker, A. S., Marcovitz, D. M., Miller, J. D., Keklikian, J. D., & Liu, A. C. (1989). *Earth science: The earth and its resources* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Baker, A. S., Marcovitz, D. M., Miller, J. D., Keklikian, J. D., & Liu, A. C. (1989). *Earth science: The earth in motion* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Baker, A. S., Marcovitz, D. M., Miller, J. D., Keklikian, J. D., & Liu, A. C. (1989). *Earth science: The earth in space* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Baker, A. S., Marcovitz, D. M., Miller, J. D., Keklikian, J. D., & Liu, A. C. (1989). *Earth science: The eras of the earth* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Baker, A. S., Marcovitz, D. M., Miller, J. D., Keklikian, J. D., & Liu, A. C. (1989). *Earth science: The rock cycle* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Baker, A. S., Marcovitz, D. M., Miller, J. D., Keklikian, J. D., & Liu, A. C. (1989). *Earth science: The sea in motion* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Baker, A. S., Marcovitz, D. M., Miller, J. D., Keklikian, J. D., & Liu, A. C. (1989). *Earth science: The water cycle* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

1988

Siegel, M. A., & Patterson, B. A. (1988). *To and from Russian*. Part I. [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., & Patterson, B. A. (1988). *To and from Russian*. Part II. [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

- 1985 Kuznetsov, H., & Siegel, M. A. (1985-86). *Courseware on road design* . (This is an introduction lesson to 35 lessons). [Computer-based instructional curriculum]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.
- 1984 Shultz, E. J., Liu, A., Dixon, R. C., & Siegel, M. A. (1984). *Capitalization III* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.
- Dixon, R. C., Larson, B., O'Connell, D., & Siegel, M. A. (1984). *Pronoun case* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.
- Dixon, R. C., Siegel, M. A., & Felty, J. M. (1984). *SRA writing skills* [Computer-based instructional program]. Chicago, IL: Science Research Associates, Inc.
- 1983 Shultz, E. J., Liu, A., Dixon, R. C., & Siegel, M. A. (1983). *Comma rules* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.
- Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Basic economic systems* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.
- Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Capitalism, communism, socialism* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.
- Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *The civil war* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.
- Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *The election process* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.
- Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Forms of government* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.
- Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Free enterprise and government regulation* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.
- Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Free trade and tariffs* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Governmental separation of powers* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Industrialization and the growth of cities* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Production and consumption* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Representative democracy and political parties* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Taxes* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *U.S. colonization to independence* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *U.S. confederation of constitutional convention* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *The writing of the U.S. Constitution* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Cell structure* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Functions of the blood* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Genetics and heredity* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Green plants and photosynthesis* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Growth and metabolism I* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Growth and metabolism II* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Life functions and cells* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Reproduction by male and female cells* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Reproduction of single cells* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Reichmann, L. P., Davis, D. M., Shultz, E. J., Stevens, R. J., & Dixon, R. C. (1983). *Tissues, organs, and systems* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Stevens, R. J., Siegel, M. A., Reichmann, L. P., Dixon, R. C., & Liu, A. (1983). *Casino reading* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

1982

Shultz, E. J., Fuller, D., Dixon, R. C., & Siegel, M. A. (1982-83). *Subject-verb agreement I* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Shultz, E. J., Fuller, D., Dixon, R. C., & Siegel, M. A. (1982-83). *Subject-verb agreement II* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Shultz, E. J., Liu, A., Dixon, R. C., & Siegel, M. A. (1982-83). *Subject-verb agreement III* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Shultz, E. J., Liu, A., Dixon, R. C., & Siegel, M. A. (1982-83). *Capitalization I-II* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Dixon, R. C., Fuller, D., Shultz, E. J., Silver, D., & Siegel, M. A. (1982-83). *Paragraph proofreading* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Dixon, R. C., Fuller, D., Liu, A., & Siegel, M. A. (1982-83). *Y to I rule* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Dixon, R. C., Liu, A., & Siegel, M. A. (1982-83). *Direct object recognition I* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Dixon, R. C., Liu, A., & Siegel, M. A. (1982-83). *Doubling rule* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Dixon, R. C., Liu, A., & Siegel, M. A. (1982-83). *Final e rule* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Dixon, R. C., Liu, A., & Siegel, M. A. (1982-83). *Verb recognition II and III* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Dixon, R. C., Liu, A., Silver, D., & Siegel, M. A. (1982-83). *Spelling I-IV* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Dixon, R. C., Mahan, K., Silver, D., & Siegel, M. A. (1982-83). *Antonyms I-II* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Dixon, R. C., Mahan, K., Silver, D., & Siegel, M. A. (1982-83). *Synonyms and antonyms* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Dixon, R. C., Mahan, K., Silver, D., & Siegel, M. A. (1982-83). *Synonyms I-II* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Dixon, R. C., Zelchenko, P., & Siegel, M. A. (1982-83). *Prefixes and suffixes* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Dixon, R. C., Zelchenko, P., & Siegel, M. A. (1982-83). *Subject recognition* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Dixon, R. C., Zelchenko, P., & Siegel, M. A. (1982-83). *Verb recognition I* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Garrard, J., Felty, J. M., Dixon, R. C., & Siegel, M. A. (1982-83). *Using negative words* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Gilpin, M. O., Siegel, M. A., Silver, D., Mayeda, J., & Mahan, K. (1982-83). *Words commonly confused* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Silver, D., Liu, A., Dixon, R. C., & Siegel, M. A. (1982-83). *Forming possessives* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Silver, D., Reichmann, L. P., Dixon, R. C., & Siegel, M. A. (1982-83). *Irregular verbs I-V* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Gilpin, J. B., Felty, J. M., & Siegel, M. A. (1982). *Contractions* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Stevens, R. J., Reichmann, L. P., Liu, A., Siegel, M. A. & Dixon, R. C. (1982). *Finding the main idea* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

1979 Siegel, M. A., Bruner, E. C., Maggs, B. (1979). *Pacer passages I-XIII* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Felty, J. M., & Reichmann, L. P. (1979). *United States and Illinois Constitutions, History and Government, Declaration of Independence, and United States Flag Code: Drills and tests* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

1978 Siegel, M. A., Becker, R. R., Gilpin, M. O., Bruner, E. C., Bowery, J. A., & Felty, J. M. (1977-78). *Wordstudy I-VI* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory. (30 lessons)

Siegel, M. A., DiBello, L. V., Bruner, E. C., & Felty, J. M. (1977-78). *PCP reading comprehension I-IV* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory. (40 lessons)

1977 Dugdale, S., Kibbey, D., Leung, H., Siegel, M. A., & Felty, J. M. (1977). *Facts: Practice* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

1976

Avner, R. A., Tatsuoka, K., Weaver, T. A., Avner, E., Boggs, S. H., & Siegel, M. A. (1976). *PEER area package* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

McCormick, R., Gaburo, K., Siegel, M. A., Misselt, A. L., & Tatsuoka, K. (1976). *Anatomical terminology IV: Competitive drill on prefixes and suffixes* [Computer-based instructional program]. Urbana, IL: University of Illinois, School of Basic Medical Sciences.

Siegel, M. A. (1976). *Opinion survey and analysis package* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

1975

McCormick, R., Gaburo, K., Siegel, M. A., Misselt, A. L., & Tatsuoka, K. (1975). *Anatomical terminology III: A competitive drill on root words* [Computer-based instructional program]. Urbana, IL: University of Illinois, School of Basic Medical Sciences.

Siegel, M. A., & Bruner, E. C. (1975). *Spell: A drill on one hundred and one most commonly misspelled words - Parts I, II & III* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Eisenberg, J. D., Liu, A., & Volpe, T. M. (1975). *Introduction to using PLATO* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Misselt, A. L., & Tatsuoka, K. (1975). *Corrective feedback paradigm* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.

Siegel, M. A., Misselt, A. L., & Tatsuoka, K. (1975). *Corrective feedback paradigm: An example* [Computer-based instructional program]. Urbana, IL: University of Illinois, Computer-based Education Research Laboratory.