



Logo Summer Institutes

by

Michael Tempel

Presented at the VI Congreso Logo

Caracas, Venezuela

September 1993

©1993 Logo Foundation

You may copy and distribute this document for educational purposes provided that you do not charge for such copies and that this copyright notice is reproduced in full.

Summer Institutes have long been a corner stone of teacher education in Logo. These extended workshops, held during the relaxed time when immediate classroom concerns are distant, provide the ideal environment in which teachers may learn Logo.

During the summer of 1993, I organized and led three Logo Summer Institutes, the most recent of more than a score of such workshops I have been involved in over the past 14 years.

The format and style of Summer Institutes is not unique to Logo. My first experience with this approach to professional development was during the 1970s at The Workshop Center for Open Education at The City College of New York. Under the Direction of Professor Lillian Weber, the Workshop Center offered a variety of support services and educational opportunities for teachers in the New York City Public Schools. These activities included annual Summer Institutes where the emphasis was primarily on gaining knowledge of learning styles, subject matter, and materials. This background formed the basis for planning curriculum and classroom activities.

In a sense, Logo Summer Institutes are more narrowly focused than the Institutes at the Workshop Center because they are specifically about Logo. But on the other hand, Logo itself is more flexible and broadly adaptable than most of the materials we used in those earlier workshops at City College.

Three Districts

The 1993 Logo Summer Institutes were conducted in three very different school districts in the United States: The St. Paul, Minnesota Public Schools, New York City Community School District 3, and the Caldwell-West Caldwell, New Jersey Public Schools.

New York City Community School District 3

District 3 is one of 32 local districts within the New York City Public School system. It serves an economically and ethnically diverse population of 14,000 kindergarten through ninth grade students in 41 schools and programs.

Three teachers from two District 3 schools began using Logo in 1980 as part of The New York Academy of Sciences Computers in Schools Project, one of the first Logo school projects outside the immediate orbit of MIT. From that modest beginning Logo has spread throughout the district.

The district now has two "Computer Schools," one at the elementary level and the other a middle school, with high densities of computers and extensive use of Logo. In many other schools, Logo forms the foundation of the computer education program. All District 3 schools have Logo.

Over the years District 3 has offered short Logo workshops and teachers have also taken advantage of the many Logo courses, seminars, and other support activities that are available in New York. But, there had been no major summer workshop for more than ten years. The 1993 Logo Summer Institute was planned in order to fill this need. This was seen as especially important for the many new teachers who have come into District 3 with little or no Logo experience. Forty teachers from ten schools attended the Summer Institute.

St. Paul Public Schools

St. Paul, Minnesota has 66 public schools serving 38,000 students. The St. Paul Logo Project has been a collaborative effort among the Public Schools, several local universities and companies, MIT, Logo Computer Systems and, more recently, the Logo Foundation. Logo Institutes have been held every summer for the past 12 years. Approximately 350 teachers from half the schools in St. Paul have attended one or more of these workshops over the years. Currently 20 schools are actively involved in the Logo Project.

Caldwell - West Caldwell Public Schools

Caldwell is a suburban community 30 miles west of New York City with six schools serving 3000 students. Logo has been used in a limited way over the past ten years in

the lower elementary grades.

Computer use has recently been expanded with new acquisitions of hardware and software supported by increased staff development activities. At the elementary level (grades kindergarten through five) there are two or three computers in each classroom. All teachers attended a series of Logo workshops during the 1992 - 1993 school year. All teachers use Logo with their students. The 1993 Logo Summer Institute was attended by 20 teachers representing 40% of the district's elementary school teaching staff.

In spite of the unique history and circumstances of each of these districts, there were great similarities among the three workshops. Each workshop ran for four or five full days. Staffing of each workshop included several experienced teachers acting as facilitators (a term I prefer over "instructors") along with me. This approach not only served to make workshops with 20 to 40 participants manageable, but it also reinforced the expertise of each district's own staff members. In Caldwell and District 3 several children also assisted the participants.

Each Institute was comprised of three main components:

Logo Lab

This aspect of the Institutes accounted for 75% to 80% of the total time. Each participant had a computer, Logo software, and an assortment of reference materials, tutorials, activity cards, and project books. For beginners the goal was familiarization with Logo. Experienced people developed skills by working on a project in a chosen area. The Logo Lab also served as a model for the work teachers would later do with their students. (One aspect of this modeling was that people of all levels of expertise could be served in the same workshop. "Tracking" is not needed.)

The version of Logo chosen in all three districts was LogoWriter. The project books, activity cards, and reference guides that come with this software were used extensively. Beginners were encouraged to work through one of the introductory project books. Experienced people were guided to more advanced projects in the LogoWriter materials and to other activity sheets and books that were provided.

As a culminating activity of each Institute participants presented their projects to the entire group.

Issue and Ideas

Participants were provided with articles and excerpts from books. These recommended readings formed the basis for daily discussions about educational issues and ideas related to Logo. In District 3 and Caldwell, the readings were specifically about Logo. Over the week discussion topics moved from general issues of learning and teaching towards the specifics of classroom use of Logo. In St. Paul

the readings and discussions focused on broader issues of education and society and were not specifically about Logo.

Classroom Practice

Teachers met with colleagues in the same school to make concrete plans for implementation of Logo in their classrooms and computer labs during the coming school year. In St. Paul, these meetings were held during extended lunch periods of an hour and a half each day. In all three workshops, descriptions of classroom projects written by teachers, and sample projects on disk and video provided concrete examples of the kinds of Logo work done with children.

Follow-up Activities

Additional professional development activities are planned for the 1993 - 1994 school year in each of the three districts.

In St. Paul, there will be two workshops, each a day and a half long, for the same teachers who attended the summer Institute. The first of these workshops will provide an introduction to Logo and robotics using LEGO Logo. The topic of the second workshop will be determined at a later date. Preceding each of the two follow-up workshops I will conduct a one-day "advanced" Logo session for the facilitators

Experienced St. Paul teachers will also lead a six session Logo Seminar where teachers will bring their Logo problems to be discussed and solved in the group.

In Caldwell, there will be 16 days devoted to Logo workshops during the 1993 - 1994 school year. The content and format are currently being determined. Similarly, in District 3, follow-up activities are now being planned. Teachers in both of these districts are also able to avail themselves of a range of Logo activities in the New York area. These include meetings and seminars run by the New York Logo Users Group, and electronic bulletin boards with Logo activity.

Bibliography of Logo Summer Institute Materials

Software and Documentation

LogoWriter Primary (Logo Computer Systems, Inc.)
LogoWriter Intermediate (Logo Computer Systems, Inc.)
LogoWriter Secondary (Logo Computer Systems, Inc.)
Introducing LogoWriter (Logo Computer Systems, Inc.)

Video

African Textiles (Logo Foundation)
A Revolution of Opportunities (Omar Dengo Foundation)

Seymour Papert On Logo (Logo Foundation)
Seymour Papert On LogoWriter (Logo Foundation)
Talking Turtle (Public Broadcasting System)

Books and Articles

Abelson, Hal and diSessa, Andrea *Turtle Geometry*, MIT Press, 1981

Bull, Glen and Tipps, Steve "Problem Spaces in a Project-Oriented Logo Environment" *The Computing Teacher*, December/January 1983/1984

Fire Dog, Peter "Exciting Effects of Logo in an Urban Public School System" *Educational Leadership*, September, 1985

Goldenberg, E. Paul and Feurzeig, Wallace *Exploring Language with Logo*, MIT Press, 1987

Harper, Dennis O. "Cross-Cultural Transfer of a Programming Language" *T.H.E. Journal*, August 1992

Harvey, Brian *Computer Science Logo Style*, MIT Press, 1985

Papert, Seymour "New Cultures From New Technologies" *BYTE* September 1980

Papert, Seymour "Computer as Mudpie" *Classroom Computer Learning*, January 1984

Papert, Seymour *The Children's Machine*, Basic Books, 1993

Papert, Seymour *Mindstorms*, Basic Books, 1980

Reich, Robert *The Work of Nations*, Vintage Books, 1992

Rosen Marian "Lego Meets Logo" *Classroom Computer Learning*, April 1988

Sternberg, Robert J. *The Triarchic Mind*, Viking, 1988

Soloman, Cynthia *Computer Environments for Children*, MIT Press 1985

Projects

Allen, Laura *Cityscapes*, Logo Foundation, 1993

Kraft, Helen "Logo Animals" Unpublished, St. Paul Public Schools, 1992

Mihich, Orlando *African Textiles*, Logo Foundation 1993

Resnick, Mitchel *Logo Overnight*, Logo Foundation 1992

Rosen, Marian "But Wait, There's More" *Classroom Computer Learning*, October 1987

Trocco, Thomas *Egyptian Hieroglyphics*, Logo Foundation, 1993