The form education takes is so important because form carries meaning. Education expresses meaning as much as paintings, pantomime, and poetry. Just as we can view these aesthetically, so we can view education aesthetically.

In this study, I used aesthetic criteria and artistic criticism to explore possible meanings in one part of a kindergarten and 1st grade curriculum, Writing to Read, a computer-based program for beginning readers. Writing to Read offers a unique opportunity for artistic criticism; in its lab setting, it combines the long-accepted notion of teaching reading skills to young children with the more recent cultural priority of computer literacy. The early use of computers, the early (kindergarten) exposure to formal reading materials, the program's cost, the infusion of a consumer product into the curriculum, and the program's separation from the regular school day all piqued my interest.

The purpose of this study was not to analyze the effectiveness of Writing to Read. Many studies have already done so. In his analysis of 29 studies from 22 school districts, Slavin found the program's effectiveness questionable, especially its long-range effects. I was interested not in effectiveness,
however, but in meanings expressed in the program. I sought meanings in the program's forms and patterns and rhythms, meanings possibly not intended or even recognized.

The setting was a large suburban school. I played the role of observer. I started with a kindergarten class of almost 30 students the day in April they began the program and continued observing several days a week until most children had completed the program in the following December as 1st graders. I observed for about 25 hours overall, taking brief notes and sometimes jotting down questions that came to mind.

I was seated in a chair when the children came into the Writing to Read lab. I observed all I could from my corner, moving around when I needed to hear or see something across the room. For the most part, the children ignored me, even though they must have wondered sometimes why I didn't help them with the tape recorders or make them pick up a crayon on the floor. On the rare occasions that a child asked me what I was doing there, I would respond, "I'm trying to learn about Writing to Read." Although the teachers were more aware of my presence, they knew me, and I believe they were not disrupted by my presence.

I wanted to gain a sense of a specific Writing to Read program, to find meaning in it, to look at it with new lenses in a different light. Artistic criticism was my medium for this pursuit.

EDUCATION AS ART

The concept of education as an artistic endeavor is not new. Some researchers have long considered teaching, for example, an art. Kagan states:

Anyone who has taught or who is well acquainted with teachers knows that a skilled teacher derives an aesthetic satisfaction from creating a well-crafted "composition". This includes satisfaction with the shape of the lesson as it might be depicted in graphic form, as well as a kind of euphoria after the performance.  

In a classic work that first appeared more than 25 years ago, Huebner calls for an aesthetic view of education that would allow us to value educational activity in terms "of wholeness, of balance, of design, and of integrity." Mann asserts that a curriculum can be "artful" and can be considered an artistic creation. As such, it is subject to artistic criticism.

Vallance has identified four functions of art criticism:

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• revealing the uniqueness of individual works
• re-educating viewers’ perceptions by identifying new or previously unnoted functions of the work
• providing a means for judgment
• creating order by labeling, naming, and forming categories

In performing these tasks, the art critic has at least one advantage over the educational critic. The art critic does not puzzle over the form of the object to be critiqued: A painting is a painting; it is not a play or a dance or an opera. The educational critic does not have such an easy task:

Which forms [of art] are appropriate to the metaphor of educational criticism . . . Music and drama are scripted, yet artistic geniuses are free, within limits, to interpret a work. One hears slightly different cadenzas as different virtuosi play Mozart’s clarinet concerto. Richard Burton says his portrayal of Hamlet is different each night. . . . Is schooling scripted? . . . Is schooling multidimensional like opera and ballet, or is it a single dimension, like painting and symphonies? . . . A novel and poem can be seen as documents, while a play, opera, and ballet are enactments. Is curriculum a document, or is it an enactment? Is it both?

Kagan believes that various metaphors are appropriate: “If we define teaching as a medium of communication and as an art form, we can regard a lesson simultaneously as a kinetic performance [evolving over time], a message, and a work of art.”

I did not begin my study with either a single artistic metaphor or a combination of metaphors for Writing to Read. Only after observing, reading, and reflecting did I recognize the program’s rhythmic, orchestrated nature. These concepts helped me sort out aesthetic criteria of balance and coherence and a related issue of playfulness.

Barrett notes that art criticism should answer some basic questions: What is here? What is it about? How good is it? Is it art? We should expect, then, that educational criticism would answer similar questions: What is here? What does it mean? How good is it? Is it educative?

WHAT IS HERE?

Writing to Read is an IBM program for kindergarten and 1st grade students. It is multifaceted and uses computers, audiotapes, games, puzzles, writing journals, workbooks, and books. The program assumes that writing and reading are reciprocal processes that we can enhance when we teach

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them simultaneously. Phonemic spelling is at the heart of the program; 42 phonemes, or letter-sound combinations, are taught that symbolize the sounds of the English language. Students learn phonemes to write with (encode) as they learn to read (decode) the same symbols. The transition to regular spelling occurs after the students have progressed through the program's 10 levels.

Students begin the program as a class in kindergarten and continue in 1st grade, working through 10 workbooks (work journals) that, along with the computer software, teach the phonemes. The program is self-paced; that is, students finish the program at different times.

Instruction occurs in a Writing to Read lab set up typically with five centers (work stations). IBM recommends that students rotate to a new center about every 15 minutes during the daily 60-minute period in the lab. Two centers use computers, one for running the instructional software and the other for writing stories. One center has audiotapes and earphones for children to listen to stories. Another center uses tape recorders and earphones also, but it gives instruction in the workbooks. In the third center, children can choose from various activities, including working with a flannel board, looking at books, or playing phonics games.

The program I observed varied slightly from the Writing to Read prototype both in the daily time periods and in the number of centers in the lab. The students in this program visited the lab for about 45 minutes each day rather than for a full hour. The lab contained six work stations instead of five. At the sixth station, the children worked under the direction of a teacher. They worked with Cuisenaire rods in kindergarten; in 1st grade, they worked on spelling worksheets or other language arts assignments. The large number of children participating in the program necessitated these modifications.

The lab itself was appealing. Wall, ceiling, and floor were all involved in creating the setting. Computers lined two walls, one set equipped with instructional software, the other prepared for word processing. Near the door was the listening station, a table with audiotapes and headsets for the children to listen to such classics as *Mike Mulligan and His Steam Shovel* and *Blueberries for Sal.*

In the center of the room were tables for one work station, Making Words. It was equipped with books, a flannel board, word puzzles, flash cards, paper and pencils, a bean bag chair, and more. Next to this center were tables for the sixth work station not described in the Writing to Read materials where students did work other than Writing to Read assignments. Opposite the door was a work station with tape recorders and headsets where

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instruction in the work journals occurred. Next to that was a lone table where students could draw pictures to go with their finished stones.

On two walls and slightly above the students' heads hung the ubiquitous alphabet cards of primary grades with the eternally perfect upper and lower case letters. Above them were pictures of objects with the corresponding word. In the back of the room was a bulletin board with class rules, the correct date, and the name of the teacher for whichever class was in the lab.

Children's stories and pictures were displayed around the room in profusion. Hanging from the ceiling and over each center were cards identifying the name of the center.

What I observed varied little from day to day. The children came to the door of the Writing to Read lab promptly, folders in hand. In the folders were their work journals, extra worksheets, and perhaps a copy of a story they had written. They had lined up in their rooms according to work groups so that when the Writing to Read teacher motioned for them to enter the lab, they took their seats as surely as if they were taking their places in the brass or string section of an orchestra.

Three teachers staffed the lab: the paraprofessional who ran the lab, the classroom teacher, and the paraprofessional from the class. The Writing to Read teacher first directed the children to settle in at their first station and then made sure that each child was working the correct program at the computer station. She was then free to answer their questions and give attention wherever needed around the room. The paraprofessional who accompanied the class generally sat at the work journal tables and guided the children through the exercises in their work journals. The classroom teacher would set up the disks for each child at the word processing station and oversee all the work in that area of the room.

The sound of a ping from a kitchen timer signaled the end of each mini-period at the work stations. The children stopped what they were doing and, usually with a little reminding, pushed in their chairs and waited for the word to move to the next station. The process was repeated every 12 to 14 minutes so that each child worked at three different stations every day. As the children moved from position to position, the teachers took the disks out of the word processor and filed them, rewound audiotapes, reset the software, and generally monitored the children's movements. At the end of the allotted class time, the children lined up at the door and filed out, on the way back to their room.

WHAT DOES IT MEAN?

What is the meaning of these procedures? How can we understand them? Exploring two complementary themes, played again and again, may help to bring meaning: time and control.
I observed children waiting to start, waiting to continue, and sometimes, waiting to stop. They waited when their classmates were not ready to begin or were too restless to continue, they waited when they finished at a station before the time for that mini-period had elapsed. One of the most frequent teacher comments began, “I’m waiting...” She might have been waiting for Table 3 to settle down, for Mary to finish, or for Rashon to pick up his pencil, but when the teacher waited, the children were expected to wait, too. The fragmentation of time into mini-periods and the number of children in the class led to excessive waiting.

Conversely, time fragmentation led to unnatural stopping. Children engrossed in work often had to stop without finishing. Even when they were deeply involved in a word game, a puzzle, or a story, they were expected to stop at the sound of the bell. The greatest problem came at the writing station, where difficulties getting started sometimes left only 3 or 4 minutes of actual work time.

Interruptions were common and came from many sources. The most frequent and most dissonant was the bell of the kitchen timer. Ironically, one teacher fretted: “What are we supposed to do when the bell rings? You’re supposed to stand up and stand behind your chair. [In a shaming voice] I see children who are still working!”

These conditions implicitly valued speed and expected the children to start quickly, work quickly, and stop abruptly.

The other major theme was control. Controlling the children was primary. Traffic control was a major aspect and became an art in and of itself. Children learned from the beginning how to move from station to station. No creative or independent meandering could be tolerated when time and numbers dictated that everyone had to be in the right place at the right time.

Not surprisingly, quietness was a big issue, yet the nature of the program required a lot of movement, leading naturally to noise. Frequent changes in location led to frequent comments about noise. The quietest group was often singled out for praise. This praise occurred sometimes even when individual children in the group were not as quiet or compliant as other children in the room. The unintentional unfairness in rewarding a group for such a desired behavior as quietness, though understandable, did not go unnoticed by the children.

Teachers frequently sought control through such statements as “I like the way Melissa is sitting” or “I like the way Jaronda has started to work.” In one 40-minute period, I heard a teacher begin a statement with “I like the way...” 28 times.

Authority was also inherent in the materials and media. By their design, the programmed instruction and workbooks limited choices. The children listened to taped stories, not of their own choosing, but because the stories were available. The students were directed to write or to do the assignments in their work journals because they were “supposed to.” One teacher was
particularly skittish with the computers, and her obvious sense of frustration and personal powerlessness invested extra power in them.

The children rarely controlled anything, even at the writing station, where they presumably had the greatest opportunity for control. I observed children being admonished for typing letters rather than words or for making patterns on the computer rather than writing sentences.

Of course, because of the number of children in the classes and the curriculum's time constraint, a measure of control was necessary. Control as I observed it, however, led to an implicit value in conformity and the belief that looking good may be more important than being good.

HOW GOOD IS IT?

By considering aesthetic criteria, we may achieve a sense of goodness or worth. Although many criteria are possible, I use only two here: balance and coherence. I also consider a related concept: playfulness.

Writing to Read is intended to be only part of a larger reading and writing curriculum. It is basically a skills program. Within the restricted domain of skills development, the design of Writing to Read is balanced. There is balance in the use of computers, for example: Programmed instruction is balanced with word processing, decoding with encoding. There is balance in the activities: More creative activities (writing stories) are balanced with less creative ones (programmed instruction); passive listening activities are balanced with active activities like writing or playing word games. Even the lab I observed was balanced: Computers lined opposite walls, and listening stations were placed across the room from each other.

The program's enactment, however, frequently compromised balance. Control drowned out individuality, and conformity diminished opportunities for exploration. The attempt to balance or equalize time worked against the serendipitous nature of creativity, so vital to the process of written expression.

Coherence relates to unity, cohesion, and consistency. I saw a disturbing lack of consistency between the expectation that children be creative in writing stories and in the reality that they did not have time to create. On one occasion when I heard a child groan, "But... I didn't get to finish my story," the teacher responded matter-of-factly, "You can finish tomorrow like Kirsten had to." Because of the rotation at the centers, "tomorrow" didn't even mean the next day; it meant two or three days later.

I saw little coherence between classroom work and work expected in the Writing to Read lab. In the classroom, for example, children used basal readers unrelated to the Writing to Read materials. Ideas for the stories children wrote at the computers did not seem to originate in classroom discussion or activity, nor were the children able to complete their unfinished stories away from the computers. Only behavioral expectations seemed to remain consistent from setting to setting. With only brief periods for work,
children learned to stop, not to finish. More unsettling, however, is my fear that this incoherence disturbed me more than them. Even at age 6 or 7, they had come to see incoherence as part of the meaning of school.

Playfulness is not in itself an aesthetic criterion, but it is an important aspect of artistic expression. Young children, computers, a new room, colorful pictures, bean bag chairs, wonderful books—an atmosphere for playfulness seemed inherent in the conditions.

The teachers, however, did not encourage playfulness. They seemed to consider explorations with words and shapes and sounds poor use of the time and equipment. Conversation between the teachers and the students was rarely playful; it was usually terse and to the point, presumably because of limited time. On more than a few occasions, I heard a teacher explain to a child at the writing station that he needed to stop playing because he was "supposed to be" writing. In spite of little encouragement to be playful, however, I observed children time and time again who delighted at learning to read, learning to write, and learning to work a computer.

Writing to Read is a skills program, a technical piece designed to teach students to decode and encode language. Within the confines of the design, the intended program offers symmetry, variety, and continuity. Considered as a script or a score, it has balance and coherence. But problems appear in the enactment. Viewed as a performance, poor staging threatens a long run.

IS IT EDUCATIVE?

The form of education is significant because form carries meaning. For schooling to be educative—for schooling to lead to mental and moral growth, its form must stimulate expansive, expressive, and individualistic meaning.

Writing to Read is primarily a technical segment of the curriculum, one small patch in a huge educational quilt spread over the early years of life. It is technical in both content and method.

The content is based on phonemes and sound-symbol relationships, the regularities of the language. It stresses the reciprocity of writing and reading. It teaches rudimentary computer skills: Children learn, for example, that they can sit before a computer and change the image on a screen just by pushing a button. The method is technical primarily because each student's individuality is not central. Students move from one predetermined station to another in foreordained time units.

What about the student who can read at the beginning of the program; does she have to go through all the work stations? What about the child who learns to read quickly; would he need to spend time at the work journal station? More crucially, what about the child who is captivated by the cleverness of her own story; should she have to leave it unfinished at the sound of the bell?
Can a program technical in content be other than technical in method? Can a technical program be educative?

The assumptions of a technical program—that what students learn can be known, should be known, and should be prescribed—severely restrict meaning and hamper expansiveness and individuality. A technical program, in and of itself, is not likely to be educative. The Writing to Read program I observed was not educative.

What would it take for the program to be more educative? Balance in enactment—more time for experimentation, less for programmed packages; more for uniqueness, less for conformity. Balance might result if creative aspects of the program like writing had more time than skills-oriented tasks. Balance for individuals might result if the variable time segments did not have to be the same for all children.

Increased coherence could also lead to a more educative program. Placing the program in the classroom could enhance the integration between ongoing classroom activities and Writing to Read tasks. Important also would be the awareness of those involved that the skills of Writing to Read are not ends in themselves but means to more expansive, artistic outcomes. None of these changes would likely leave an impact, however, unless the larger school environment—curriculum in its fullest sense—nurtured individuality, expressiveness, and creativity.

CONCLUSIONS

Through a qualitative study of a Writing to Read program, I discovered meaning about educativeness in the program not revealed by test data or achievement results. Based on more than 25 hours of observation and an analysis grounded in artistic criticism, I discovered meanings in the program related to control, time, conformity, and creativity.

The children had little control of anything. Control was external to them; it resided in the materials, the computers, the teachers, or the clock (not necessarily in that order). What meanings about self-direction, autonomy, creativity, originality, or independence convey to children when the environment does not nurture or even support their development?

Time, an ever-present menace, implicitly valued speed. The children were rushed ("Sit down and start working—you only have 10 minutes"), slowed down ("Let's wait for Table 3 to settle down"), stopped ("The bell sounded, everyone stop writing"). What meanings about wholeness, beauty, design, completion, and complexity are this environment likely to foster?

Conformity had value partly because of time demands and perhaps partly because of the large class size. Meanings about creativity were inherent in the organization of time and space. Creativity cannot be turned on and off quickly, nor does it look the same or the take the same amount of time for everyone. Yet the classroom setting implied each of these meanings.
Although artistic criticism was the basis for judgment here, other concerns about Writing to Read also demand attention. For example, we need to consider political issues regarding the motives behind adopting Writing to Read as well as concerns about the deskilling of teaching. A thorough understanding requires meanings derived from political and aesthetic bases along with, in Huebner's terms, technical, scientific, and ethical bases. No single set of meanings by itself is sufficient.

ARTISTIC CRITICISM: A REPRISE

The use of artistic criticism in educational settings is a natural extension of the concept of education as a work of art or of teaching as an artful performance. It casts educational activity in new patterns and allows us to consider rhythm, harmony, integrity, balance, and wholeness. It introduces new language and therefore new concepts into educational discourse.

Artistic criticism provides a unique perspective, it does not provide an all-encompassing view. It offers but one lens to view educational activity. But that lens is powerful, it can be meaning-full.

What we can productively ask of a set of ideas is not whether it is really true but whether it is useful, whether it allows one to do one's work more effectively, whether it enables one to perceive the phenomenon in more complex and subtle ways, whether it expands one's intelligence in dealing with important problems.

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