A whole language philosophy can guide the use of computers to enhance the teaching of composition and provide cautions against their misuse. A whole language classroom is student-centered. When computers are introduced into a classroom, the technology tends to draw attention to itself, making the machine the center of the lessons, forcing students to learn a new vocabulary, and learn a new way of performing old tasks. In contrast, in a whole language classroom, the computer helps in the curriculum rather than shapes it. Computer-assisted instruction at one time promoted drill-for-skill programs, and recently idea-processors, spell-checkers, and style-checkers, creating on-line versions of five-paragraph essays, focusing attention on error detection. However, a whole language classroom with computers is language rich, looking at language as exciting and dynamic, a means of bringing groups together, fostering collaborative learning and communication between and among discourse communities. (An excerpt from Kathleen Strickland's article "Toward a New Philosophy of Language Learning" is attached.) (Author/RS)
COMPUTERS AND COMPOSITION
IN THE CONTEXT OF A WHOLE LANGUAGE PHILOSOPHY

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Abstract:

A whole language philosophy can guide our use of computers to enhance the teaching of composition and provide cautions against their misuse. This oral presentation will examine how a wholistic language philosophy provides a theoretical context for computers in the classroom.

A whole language classroom is student-centered. When computers are introduced in a classroom, the technology tends to draw attention to itself, making the machine the center of the lessons, forcing students to learn how to operate the system, learn a new vocabulary, and learn a new way of performing old tasks. In contrast, in a whole language classroom, the computer helps in the curriculum rather than shapes it.

Computer-assisted instruction at one time promoted drill-for-skill programs and recently idea-processors, spell-checkers, and style-checkers, creating on-line versions of five-paragraph essays, focusing attention on error detection. However, a whole language classroom with computers is language rich, looking at language as exciting and dynamic, a means of bringing groups together, fostering collaborative learning and communication between and among discourse communities. This presentation will discuss whole language dictims for using computers in composition
and suggest appropriate whole language/computer activities and materials.
"Don't do dumb things just because the technology lets you"

The subtitle of my presentation, "Don't do dumb things just because the technology lets you," is perhaps more straightforward than the actual title, Computers and Composition in the Context of a Whole Language Philosophy. I plan to use the whole language philosophy, often thought of as an elementary school movement, in its broadest sense as an expression of progressive education as it developed in this country and as part of an educational reform movement for the teaching of language imported from New Zealand. As with any philosophy, whole language is a description of practical applications of theoretical arguments arising from research in such fields as psycholinguistics, sociology, anthropology, child development, composition, literacy theory, and semiotics.

Whole language grows out of progressive education, a theoretical position that owes more to an opposition to traditional education than to a comprehensive set of beliefs. In general, progressive education developed from Rousseau's romantic naturalism, Dewey's pragmatism, and the Montessori school of experience. It opposes social conformity, classroom authoritarianism, and a set academic curriculum as restraints upon the natural curiosity of learners. Whole language embraces
the progressive ideal of teaching students rather than teaching
subject matter, and respecting each student as an individual
learner, each blessed with unique needs and abilities. Thus,
whole language classrooms are student-centered with curriculum
which is organic, growing with and out of teachable moments as
they exist in the classroom rather than bounded by a federal,
state, or district school curriculum. When learning takes place
in the whole language classroom, children question their society,
their culture, the authorities to which they must yield, and
their own beliefs.

After a century of progressive education, the mood of the
country changed, taking a conservative perspective, and liberal
education fell out of favor along with all the other liberal
enterprises. As Basic Skills and Minimum Competency became the
goals of education, students moved farther away from being at the
center of the classroom. Correspondingly, teachers have been
told that they will be held accountable for their pupils' ability
to demonstrate basic literacy and math skills, a demonstration
certified through standardized tests, asking mastery questions
based upon a set curriculum. So where does the computer fit into
this scenario? Right in the middle of the drills-for-skills
agenda, if we let it.

In a democratic society, we can count on the fact that some
will choose not to follow a set curriculum, and others will at
least question it. Consider that the computer's abilities lie in
its power to present information, over and over, without any
cognitive awareness of its own program. Theoretically, many teachers who believe in basic skills curricula and mastery tests will at some point begin to question the premise behind instruction that appears unable to work. When the instruction/evaluation is delivered by a computer program, there will be no mutiny, no questioning, no hesitation, no faltering. The computer crunches numbers, knows logic (greater than, less than, equal to logic) and generates tautologies; it understands nothing. The computer is only a tool, yet it is not value neutral. The computer privileges information over understanding. As a tool, we can put the computer to uses as we see fit. It is within a whole language context, that it deserves to be seen fit.

My wife, Kathleen, has been "kid-watching," to use Yetta Goodman's term. She's been watching children in an institutional classroom for junior-high aged, emotionally disturbed children. One student, Mike Bee, was recently talking to her about his feelings about reading books. Mike said that he had previously thought books were all about reading words; now, he realized books were for reading stories. The point was not lost on Kathleen: Mike had previously seen books as containing symbols but in an epiphany, his literacy had changed, he became print literate. The symbols on the page contain meaning that is created in the act of reading. By analogy, the computer screen contains symbols and the symbols can be manipulated, compared, and transferred, but they are not meaningful until a reader interacts with the symbols. The text or "string variables" must
be read to be meaningful, and the computer should be used to facilitate the creation of meaning. Conversely, we should reject any uses of the computer that attempt to co-opt the meaning-making function of the user.

For example, hypermedia programs are being authored to present a more sense-oriented experience of literary classics. A great book, The Odyssey perhaps, would be presented on screen as text in an eye-pleasing large typescript with an box for an appropriate illustration, a drawing of Homer or one of the characters in the epic. The box would also act as a trigger-field that could play a video segment--something from a PBS production or a B-movie adventure film--corresponding to the text. A hot-spot or button on the screen could be triggered to hear an "reading" of the text given by a professional, an option allowing users to hear the text as their eyes follow along. Finally, all the important concepts, allusions, and references would have footnote buttons, locations that could be triggered to retrieve an explanation or corresponding information that the author of the interactive software thought would be helpful. The linked documents would themselves have boxes, buttons, and links ad infinitum. As a student "reads" the classic, the computer seems to offer a plethora of footnotes and a variety of experiences. Yet, we know there is a human agent structuring the possible experiences--the student's university professor or an anonymous programmer working for a software corporation. The important implication is that the software is being constructed
in such a way as to attempt to embed the meaning of the text in the program— with boxes, buttons, and links— rather than encouraging the reader to bring meaning to the text.

Louise Rosenblatt's transactional theory of reading holds that linguistic or visual cues in the text trigger responses that create meaning. What happens when the trigger is pulled by the software programmer responsible for making the links and supplying the content at the other end of the link? To give an example, imagine reading Poe's "Annabel Lee." One student in the class might offer in a response journal or in a class discussion that the poem's line "my darling, my life and my bride" triggered an association with Billy Idol's song/video "White Wedding." Discussion could begin in a dialogue journal or class from this association. Contrast this personal interaction with text by imagining a student reading a hypermedia version of the poem. When the student clicks on a button at the end of the line quoted, the screen dissolves to an actual video clip of Billy Idol singing the chorus to White Wedding. The screen might have just as reasonably dissolved to a video-clip of the student's professor explaining the line as a reference to Poe's first sweetheart, Sarah Royster Shelton. The computer has, in effect, forced a "reading" on the student by encoding a "meaning," one given added weight because of the technological presentation. The hypermedia reading, in a way more seductive than a classroom lecture, is an attempt to create "canned" schema in order to promote or privilege one "reading" of the text over another.
What is the point? We must consider the purpose for using the computer to deliver the text in the exciting world of hypermedia. If the purpose is to give the student information, then the computer has made great advances. If the purpose is to provide opportunities and situations where students can discover and experiment in order to create knowledge, then we may have just thwarted our desires. Allow me to explore the subtlety a little further.

Whole language is concerned with the construction of meaning, valuing the role that the reader plays in the construction. With hypertext, the world of text opens in two ways. One, the linking possibilities are already made for the student reader to sample; the possibilities are defined, however vast their number. Thus one reader's interpretation of significance, codified by the very creation of the buttons, has set the parameters for any exploration. This is a return to formalism; the established readings have been validated as "correct" or possibly correct. Their pre-existence strips the reader of an active role in construction; the reader is simply a follower of paths. The second way the world opens is for the reader--student as well as teacher--to create the links, to establish the buttons. The second use of hypertext capabilities would be within a whole language context. In this application, no one reading would be privileged above another and each reading would be unique because, as the post-structuralist posit, every sign is infinitely referential in the free play of signifiers. When
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using hypertext in the classroom, a whole language philosophy cautions us to avoid the safe route, the pre-establishment of links which conceal a return to formalist authoritarianism. Whole language would have us embrace the more dangerous route, one with no preordained paths, no party lines to follow, no set curriculum. The teacher in this application shuns the role of authority for one of facilitator, guide, and resource to be used at each reader's discretion. This is to push risk-taking to the limit and requires complete trust of students as meaning-makers, a whole language position.

In defense of the hypermedia software, my wife, Kathleen, sees value in the interactive video allowing the text to come alive on-screen. When students read Martin Luther King's "I have a dream" speech or "Letter from Birmingham Jail," they will be able to hear it read by King or a professional actor. While I worry about the option buttons that offer a brief biography of King, a newspaper account of his famous march, and perhaps a television special covering the events surrounding his death—all authorized and sanitized by the power hegemony, Kathleen sees a way to reach the reluctant reader. In the past, teachers assigned readings and simply expected students to read the assignment and come to class prepared to take notes and answer display questions about the work. Students who were unable to "get through it" would simply skip the reading and hope to glean enough from the lecture to pass the test. A whole language philosophy challenges this paradigm and encourages the use of the
computer to support reading. Kathleen sees interactive video as a form of shared reading, where students are able to follow along in the text as they hear it read aloud, giving them the opportunity to read texts they might not attempt otherwise.

In a whole language context, students learn to read while they are writing and they learn about writing by reading. I would like to look at how some software applications approach language learning. Some software offers to analyze and check writing conventions with computerized spell checkers, style checkers, sentence parsers, and on-line handbooks. These programs put undue emphasis on correctness rather than on meaning, and considering the dubious accuracy of the programs, give students either a false sense of security (I've checked it, they say) or a heightened anxiety about their abilities (The computer flagged it as wrong, and since I don't know how to fix it, I'll simply delete it, they say). Whole language teachers agree that spelling is important at some point; however, they believe that spell checkers can be misused and give the wrong message—that revision means checking one's spelling—and style checkers emphasize stylistic features—sentence length, repetition of words, reading levels, percentages of certain parts of speech—that give the impression that writing is about approximating the norms. On-line handbooks are no better than their textbook versions; although more convenient, on-line handbooks not only emphasize correctness but they give confusing advice, often of value only to someone who already understands
the rule being appealed to. What we often refer to as integrated software, computer programs that address the whole writing process, Writer's Helper for example, are usually theoretically sound, but they can be misused by being applied in a lock-step fashion. Some packages force a student to complete its prewriting exercise before allowing the writer to start on a draft. Some programs turn the prewriting exercise into a five-paragraph theme. Such applications take the fire out of the writing. Even if the technology allows a student to move around at will, the student might not be aware of the options and react to the sequence as just another algorithm--first this, then that. A whole language teacher must present the integrated exercises as demonstrations of possibilities and encourage experimentation and risk-taking.

It becomes clearer that the use of computers in a whole language context depends, to a great degree, on how the teacher approaches the situation. Computers should be used in collaborative exercises. This will take conscious effort, due to classroom/lab designs which work to heighten isolation. Regardless of the configuration of the computer lab, students operate as though closed in a carrel, their assignments sometimes even given and completed on-disk, working on isolated tasks with a worksheet mentality which says students are free to leave the lab when finished with the exercise. We have to encourage students to talk to one another about writing problems, but this is learned behavior; students will not do so spontaneously,
unless it is encouraged as appropriate. Too often the help that students offer each other, documented in testimonials of the computer's effectiveness, is help with technological problems and questions, rather than help with learning/writing expression problems. Students have learned, from their teachers and their years of schooling, about asking/giving help—it is okay to tell someone how to do something on the computer but not how to express something. Unless whole language teachers model the process, students will continue in the belief that electronic form is more important than content. I have seen students reprint their essays five or six times to get it to look right on the paper, yet they will not change the way it is expressed. Whole language teachers have to show students how to fiddle with text on screen at various levels—word, sentence, paragraph, print it to read again, and then go back and write more, changing the way their language expresses itself again and again.

Computers used in a whole language context would not consider configuring a classroom where the learner receives information from an authority or source of knowledge, manipulates the information according to a predetermined set of directions, and then receives feedback as to how adroitly the information was assimilated and returned. But this use continues, because that's what a computer does: it is an information delivery system. Whole language teachers maintain that information is not understanding; information is not education; information is not learning. Whole language teachers maintain that students have to
do something with the information, an aspect missing from many approaches to using computers to teach language, reading and writing. Whole language is concerned with understanding, with learning, and with making meaning rather than with the retrieval of information. In such a case, the teacher offers questions, artifacts, problems, situations, new information and the students must formulate interpretations. The teacher can then validate those interpretations or offer new information to modify them (and the teacher's interpretation can be modified and validated as well). If we are more and more convinced of the rightness of a whole language classroom, then we cannot have students perform activities on programs, which by their nature are predetermined, and expect learning to take place.
The Beliefs of a Whole Language Philosophy

From research have come beliefs about language learning:

1. Students learn by constructing meaning from the world around them, a view quite different from a behaviorist view of learning by imitation. The "taxonomy of learning" of Benjamin Bloom, a follower of B.F. Skinner--the basis of a great deal of contemporary teaching and learning--is "stimulus-response" learning, based on conclusions drawn from working with animals in laboratory experiments rather than on observations of how children learn. Motivation and reinforcement are necessary for the rote learning or other pointless activities that behaviorists call learning. In the real world, not the world of laboratories, people learn what is worthwhile, useful, and easiest to learn, as Frank Smith tells us in Joining the Literacy Club. [Portsmouth, NH: Heinemann, 1988].

2. Language learning is not sequential, but reading and writing skills develop simultaneously along with oral language skills. In a behaviorist classroom, reading is taught as a progression of skills through instruction in which stimuli are
standardized for each skill, so that the appropriate response would be elicited in a reader, and then objectively tested in order to be certain students are ready for the next skill. Regretably, the teaching of writing often followed this same behaviorist premise of learning from part to whole. The subskills of spelling, grammar, and sentence structure were taught through drill and practice before students were allowed to attempt real writing. Noam Chomsky, however, showed that such behaviorist approaches trivialize language and learning.

3. Curriculum in a whole language classroom is not a prescribed course of study, instead learning occurs when students are engaged and teachers are demonstrating. Unlike the behaviorist view of learning one in which teachers expected their students to operate within the teacher's assumptive bounds, whole language teachers provide their students with an opportunity to demonstrate what decisions they, as language users, are interested in and capable of making.

4. Language and language learning are learned best in an environment encouraging risk-taking; error is inherent in the process. Students learn in a language environment where they are given opportunities to transact with print and think of themselves as readers and writers. Students are more apt to use reading and writing strategies if they are immersed in an environment in which they see people, both students and
teachers, reading and writing. The development of reading and writing depends on strategies that characterize the literary expectations of proficient language users--text intent, negotiability, risk-taking, and fine-tuning language with language itself.

5. Reading and writing are context-specific and are reflections of the situation in which learning is taking place. Harste, Woodward, and Burke clearly demonstrated in 1984 that children, as readers, transact with environmental print, and their responses were functional, categorical, or specified, depending upon the children's previous experience [Language Stories and Literacy Lessons. Portsmouth, NH: Heinemann]. Young children approach written language expecting it to make sense. This same natural functional approach to language learning continues as a student uses reading and writing in the whole language classroom for real purposes and for real audiences.

6. Whole language includes all aspects of language learning--students learn to read while they are writing and they learn about writing by reading. Students may also learn about reading and writing while listening, but not when listening exclusively to their teacher lecture, an activity designed to help an adult exercise his or her language abilities.

How Can Whole Language Be Implemented?
A cookbook approach to teaching whole language is not possible, because whole language is not a program or a method. Whole language teachers use a variety of creative and innovative methods for facilitating learning. A whole language classroom becomes an environment where students' own needs and experiences provide the motivation for reading, writing, listening, and speaking activities.

Expensive elaborate materials are not needed when implementing whole language approaches. Students read texts that are familiar and meaningful, drawing upon familiar concepts and experiences to which they can relate. The whole language teacher does not worry about a sequence or hierarchy of skills; the curriculum is organized through shared planning between teacher and students. Risk-taking is encouraged and students learn from experience.

Given the rich variety of whole language classrooms, many share common elements:

1. In a whole language classroom, an environment is designed to promote literacy development; that is, a variety of language materials is readily available for student use, and the classroom becomes a clustering of literature and writing groups where peer groups or individuals work and teachers conference with them.

2. In a whole language classroom, students read and write every day.

3. In a whole language classroom, students have the
opportunity to choose what they read and write about and choose from a variety of literature written by adult and student authors.

4. In a whole language classroom, literacy is taught in a meaningful context; there is an emphasis on meaning and "making sense" in oral and written communication.

5. In a whole language classroom, skills are taught in the context of language and not as isolated exercises.

6. In a whole language classroom, students work cooperatively in groups that are formed for many different reasons, including shared interests.

7. In a whole language classroom, teachers act as facilitators rather than dispensers of knowledge.

8. In a whole language classroom, teachers demonstrate what it means to be a reader and a writer by reading and writing in and out of the classroom and sharing these literacy experiences with their students.

9. In a whole language classroom, teachers are "kid watchers," evaluating and assessing student progress based on observation, focusing on what students can do.

10. In a whole language classroom, students are risk-takers; they see learning as an exciting opportunity for open-ended response and critical thinking.