

CONNECTIONS

... bridging educational research and practice



Urban Education Studies Center • Corinne A. Seeds University Elementary School
• Graduate School of Education & Information Studies • UCLA

Managing Information in a Digital Age

by Sharon Sutton & Judith Kantor

When children generate questions out of passion for their subject and a need to know, they become more engaged and better learners. The UES Information Management Curriculum offers tools to help children search for, make sense of and organize the ever-changing and expanding amount of information available from the internet and other sources.

Do turtles jump?

Can bees pollinate flowers of different colors?

How are the lungs affected by an asthma attack?

When children of different age groups posed these questions in their classrooms at Seeds University Elementary School (UES), they used their skills in information management to find the answers.

The 4-year-olds wanting to know about turtles, for example, did some of their research on the internet. The 5- to 7-year-olds cared so deeply about the issue of pollination they argued the point until they decided to ask an expert, the school gardener and groundskeeper. And the 11-year-old wanting to know about asthma searched the internet, asked experts and went to the library.

To get students to generate such questions, teachers didn't simply present information to them, they sparked their curiosity and provided them with the skills to research, discover and learn. They did this in part by using the UES

Information Management curriculum, which helps children navigate, evaluate and use information from a variety of sources in a variety of situations.

In 1994, when UES acquired school-wide access to the World Wide Web, students and teachers suddenly had access to massive amounts of information. But even though much of it added to curricular studies, there was much that was useless and even harmful for children. This situation sparked an inquiry among a group of teachers who wanted to take advantage of the opportunities while also handling the difficulties of a world in which abundant information is readily available. Our inquiry led us to create, in collaboration with researchers from the UCLA Graduate School of Education & Information Studies and students from UES and public schools, a Pre-Kindergarten through 12th-Grade curriculum for developing skills in gathering, evaluating, organizing and presenting information from a variety of sources. Following is a

brief account of the process by which we developed the curriculum and a description of the curriculum itself.

The Process

Initially, our inquiry raised as many questions as it answered. Some of these questions included:

- How do we insure that students are learning from the materials they access?
- How can we insure that what students acquire, whether from

continued on page 9

SPRING 2000

Also in this issue:

Safe Schools
3

**What is the Best Age
for Kindergarten?**
8

CONNECTIONS

Publisher

Urban Education Studies Center
Graduate School of Education
& Information Studies (GSE&IS)
UCLA

Director

Deborah Stipek

Editor

Laura Weishaupt

CONNECTIONS is published twice yearly by the UCLA Urban Education Studies Center at Corinne A. Seeds University Elementary School, Mailbox: 951619, Los Angeles, CA 90095-1619. Contents © The Regents of the University of California, 2000. Portions of this newsletter may be reprinted with our written permission.

UESC Steering Committee 1999-2000

Megan Franke, chair, professor
Isabel Castro-Melendez, parent
Cathleen Galas, teacher
Ronald Gallimore, professor
Frankie Gelbwachs, program director
Anne Gilliland-Swetland, professor
Kris Guttierrez, professor
Margaret Heritage, school administrator
Carollee Howes, professor
Alison Imbens-Bailey, professor
Jan Powell, teacher
Kathy Smith, parent
Aimée Dorr, dean
Deborah Stipek, professor,
school administrator



UCLA
Urban Education Studies Center
Box 951619
Los Angeles, CA 90095-1619
<http://www.gseis.ucla.edu/research/uesc.html>

(310) 825-2623

A Message From the Director

Good Education is More Than Good Instruction

It has been more than a year since the tragic school shooting at Columbine, but the memory is indelibly marked in our minds, renewed from time to time with vivid reports of new tragedies. We hear most about shootings in schools, but for every youthful death in a school there are hundreds on the streets.

Elementary school is not too early to begin worrying about the seeds of such tragedies. This is when children develop a sense of who they are, of the rules for social interaction; it is when they develop emotional strengths and weaknesses, when they learn social skills and strategies for dealing with social conflict.

Some of this they learn from explicit teaching. Most they learn from their environment. A picture is worth a thousand words. To promote positive social and emotional development in children—to prevent the kind of tragedy that occurred at Columbine, as well as the daily hurts that children can inflict on each other—we need to provide socially and emotionally supportive environments with positive models.

This is why Seeds UES has embarked on a self-conscious effort to ensure a social climate in which even minor put-downs are not tolerated. We are striving to ensure that all individuals in the school—adults and children alike—are consistently treated with respect. We try to address the small conflicts, teaching children social problem solving and emotional self-regulation, when they happen. We hope that by doing so, children will develop the kind of respect for themselves and for others that will prevent them from purposefully causing harm.

— Deborah Stipek

**Browse CONNECTIONS on the UESC website,
where you can also find a link to the
Seeds UES home page:**

www.gseis.ucla.edu/research/uesc.html

Violence Prevention in Elementary School: A Systemic Safe School Approach

by Adrienne Nishina, Jaana Juvonen & Ann de la Sota

Dealing with peer aggression before it escalates into violence is the key to creating and maintaining an atmosphere of safety in schools. Seven key components are necessary.

Too often we have turned on the television news or looked at the newspaper and been taken aback by the frightening images: anguished faces of injured children, classrooms and playgrounds marred by bullet holes. Each time we have gone through the emotions—shock, pain, sorrow, disbelief. And at some point we have asked questions: How could such a thing happen in our schools? What can we do to prevent it from happening again?

Unfortunately much of the discussion about prevention has focused on increasing school security (e.g., using metal detectors, see-through backpacks, hiring more police officers and security guards, etc.). Indeed, an entire industry has arisen around helping educators prevent students from bringing weapons onto school premises. But if we look deeper we find that most aggressive episodes in schools are not violent in nature nor do they involve weapons. Rather, they have to do with bullying and peer harassment, both of which can lead to or provoke violence. To help stop violence in schools, we need to address directly children's hostile intentions and feelings of vulnerability. We need to develop ways to deal with peer aggression in schools *before* it escalates into acts of violence.

In this article, we describe an approach to violence prevention that we have developed at UCLA's Seeds University Elementary School (UES). An alternative to short-term programs that focus only on punishing perpetrators or keeping weapons out of schools, the UES Safe School approach offers a systemic means to fostering the physical, mental, emotional and social safety of all students and staff members at the school.

Seeds University Elementary School's Systemic Approach

UES Safe Schools is designed to provide a long-term preventative solution to violent behavior. Taking a systemic approach, Safe Schools is not focused on only some children, nor does it consist solely of independent units of instruction. Instead, all children are taught what type of behavior is unacceptable and how they can deal with "put-downs" and other forms of hostile behavior. Moreover, the instruction and intervention (teacher-directed mediation) components are integrally linked.

continued on page 4

Typical Violence Prevention in Elementary Schools

Schools have adopted a variety of violence prevention tactics, but unfortunately most offer limited, short-term solutions. As a result, typical approaches do not facilitate long-term changes in the behavior of students. Three common solutions employed at the elementary level include: (1) harsher punishment of aggressive students, (2) intervention programs for aggressive children, and (3) educational programs and workshops about bullying.

Punishment of Aggressive Behavior. One typical response to violent outbursts or aggression among students has been to advocate for harsher punishment of children who bully their peers. This is often accomplished under "zero tolerance policies." Students who get caught bullying others receive detention, suspension, or even expulsion sentences. Proponents assume that harsher punishment deters future undesirable behavior, but there are flaws with this assumption:

1 Although punishment is expected to teach compliance with rules, many aggressive youth do not follow school rules in order to avoid punishment.

continued on page 7

Safe Schools

continued from page 3

Seven Critical Components for Moving Toward Safer Schools

1 A Whole School Approach

UES Safe Schools is not a separate program, but a way of life for the UES community. All teachers, staff, students, and parents must be committed to the mission to create a safe school culture. Every student and parent signs a contract agreeing to abide by the Safe School guidelines. Furthermore, the program is designed to be integrated—to be inextricably interwoven—into the culture of the school. Lessons are embedded in the regular curriculum (rather than presented as separate instructional units) and are conducted in all classrooms to teach the meaning of Safe School rules, the consequences of rule violations, and most importantly, the ways in which children can deal with “put-downs.”

2 A Focus on Prevention: Setting Up Clear Safeguards and Rules

The UES Safe School approach is based on a belief in equity and democratic rights. Guidelines present students, staff, and parents with clear boundaries of what are called Safe School Rules. Violations include physical aggression, threats, taunts, negative name-calling or teasing that pertain to students’ academic progress, appearance or cultural, ethnic, religious or family background. Of utmost importance are (1) the recognition that physical and psychological peer intimidation are problems at school, and (2) explicit instruction regarding ways in which children can deal with situations when they are—or fear to be—targeted. This approach is particularly effective for those children who are repeatedly harassed by their peers; they do not have to be identified for separate intervention that is potentially stigmatizing for children.

3 An Immediate Response and Follow-Through

The crucial factor in changing the climate of the school is that teachers hear, see, and intervene. The staff uses Safe School violations as invaluable “teachable moments” that reinforce the mission of the school. A well-defined procedure to respond to Safe School violations is in place. When such violations occur, a school staff member stops the on-going activity and proceeds by eliciting reports from all students involved. Regardless of their role in the incident, students are commended when they engage in responsible behaviors during the reporting (e.g., describing the incident truthfully). Following the reports, appropriate action—which can range from a discussion and warning to attendance in “Traffic School” (see below)—is determined by a designated staff member.

4 Instructional Interventions: Mediation in “Traffic School”

The first course of action in a peer conflict situation is an attempt at mediation. However, when students violate the Safe School Rules and cannot peacefully resolve the conflict, they are considered unable to participate in the flow of “school traffic.” The intervention process is designed not to be punitive, but rather to serve as a learning opportunity. In traffic school, a staff member reviews the incident with the students and makes sure that students express and understand each other’s motives and

feelings. With the guidance of the staff, students then generate and practice replacement behaviors that could have been used in the situation and can be used in similar future situations (appropriate behaviors for both the instigator and the target). This process builds students’ repertoire of behavioral options from which to choose when peer conflict occurs. To promote learning, the focus of the conflict resolution process is on problem-solving. After attending traffic school, students are deemed safe to merge back into the traffic of the school.

5 Safe School Expert and Staff Committee

A designated staff member serves as the Safe School expert and the advocate for the program. With the assistance of a Safe School committee that functions similarly to a curriculum committee, the Safe School expert is in charge of the operation of the program and constant refinement of the Safe School policies. The advantage of the committee is that it provides different perspectives from teacher representatives from various grade levels who can assist in designing and revising developmentally appropriate curricula and procedures.

6 Integration into the Academic Program

Lessons related to responsible and respectful behavior are woven into the academic program of the school. Books and other reading materials are selected in part for the lessons they teach. Discussions and writing assignments are often focused on issues related to the character and behavior of the individuals children encounter in their reading—whether in a book, a poem or a social studies lesson. In

Peer Harassment in Focus

Harassment involves psychological intimidation; it takes many forms and can be physical or verbal, overt or covert (e.g., name calling or involving a third party, as in rumors). Forms or manifestations of aggressive behavior vary by gender and age:

- **Direct verbal forms of bullying** (e.g., name-calling) are most common; they are prevalent for boys and girls of all age groups.
- **Physical aggression** is more typical among boys and tends to decrease with age.
- **Indirect or relational forms of bullying** (exclusion or spreading rumors) are more prevalent among girls; they increase with age for both genders.

Instigators. Although there are some individual risk factors (e.g., impulsive temperament) that predict the likelihood of a child bullying others, there are also important environmental factors that contribute. For example, large schools and school environments that allow children to intimidate one another foster such behavior. Often, children who bully others receive support and encouragement from their peers. Bystanders tend to side with the instigator rather than with the target. By watching the event unfold, they reinforce the behaviors of the instigator. Attempts to intervene by personally defending the target or by seeking assistance from an adult are rare (and sometimes related to worse outcomes) and they become even more infrequent at the higher grade levels. Thus, the school environment can maintain and cultivate a culture of harassment.

Targets. Bullying is not completely random; rather, it typically is targeted at certain individuals. Research shows that most targets of peer-directed

hostilities are insecure and withdrawn. They rarely have friends. However, these characteristics seem to worsen under repeated and continuous peer intimidation. For example, an initially withdrawn child is likely to be an easy target, but repeated intimidation is likely to make this person even more withdrawn and anxious in social interactions. Thus, the environmental conditions under which bullying flourishes exacerbate the plight of those who are repeatedly harassed.

Aggressive Targets. Some children possess characteristics of both aggressive and victimized youth. Indeed, a smaller subgroup of “aggressive victims” has been identified. This group is particularly vulnerable in that they seem to lack the ability to regulate their emotions. They may be frequent targets and retaliate, or they may target others, who then respond aggressively. Aggressive targets are also the most ostracized by their peers.

Direct and Indirect Effects. Personal experiences of harassment lead to immediate psychological problems, including anxiety, depression, and a negative self-image for the target. These personal problems associated with peer harassment in turn lead to negative attitudes toward school, lower grades, and increased rates of absenteeism. In some cases, these negative social experiences may have lasting effects into adulthood. Harassment also has indirect effects, as children who witness harassment at school experience increased levels of daily anxiety. Hence, bullying compromises the well being of the targeted individuals as well as those who are not directly involved in the incidents.

all cases, teachers attempt to make the curriculum relevant to children’s own experiences. Children are more motivated to develop basic skills if the topics are personally relevant, and they can learn moral lessons in the context of learning basic skills.

7 Continuous Evaluation and Development of the Program

The needs of students and schools naturally change over time. As a result, developing and maintaining an effective program requires continuous evaluation

and calibration. Collaboration between the Safe School Committee and researchers has made it possible to gather systematic, longitudinal data on the program’s implementation and effectiveness. Students, in particular, are valuable informants of glitches and gaps in the system that need revision. Collaborating researchers conduct periodic observations on the playground (where most harassment and conflict situations emerge) and students are surveyed on random days regarding harassment incidents, resolution attempts, and emo-

continued on page 6

Safe Schools

continued from page 3

tional responses to various forms of aggression. Teachers also give feedback informally and during meetings of the Safe School Committee.

Signs of Effectiveness

Although we are still analyzing the data we have collected this year, preliminary results point to success in several areas:

Changes in overt behaviors: Parents, students, and teachers have reported that overtly hostile behaviors (e.g., name calling, physical aggression) have been reduced since the start of the Safe School program, thereby making the school a more pleasant learning environment. Teachers are also sending fewer children to traffic school, which may be a result of fewer incidents or of children's improved ability to resolve conflicts peacefully on their own. Either of these would indicate success for the program.

Changes in teacher efficacy: Teachers and staff report that the system's clear rules help them feel more empowered to intervene when student conflict arises and more effective when they do so. The program has also enhanced the feelings of cohesion among staff.

Changes in children's thinking: Teachers and parents report that children are using the language of the Safe School program to tell their peers when they are engaging in aggressive or unwanted behavior as well as in describing the behavior to adults. A 5-year-old, for example, told her mother that she had been upset when a classmate "excluded" another child from a group activity. They also use Safe School language to negotiate home/family interactions, such as using "exit" behaviors to keep an argument with a friend from escalating or to avoid a potentially dangerous situation at the park or other neighborhood play area.

In addition, fewer children are going home with strong reactions to daily events. Talking in group situations, both during class and in after-school discussions, helps students to cope with their feelings and also creates awareness that they are not alone in experiencing negative incidents. After the first year of implementation, UES students in the voluntary summer program, which includes a majority of

students from other schools, requested that the Safe School rules be implemented during the summer. This may be one of the most compelling signs of the success of the systemic Safe School approach: students' self-initiated continuation of Safe School practices outside the regular school day, in the after-school program, at home and in summer school.

Serving the Needs of the School Community

An important component of UES's Safe School approach is that it is a collaborative effort between teachers, students, researchers and parents. Continued feedback from and communication between all members of the school community help ensure that the program continues to serve their needs.

Children's comments, for example, have shown us that even though it is important for the entire school to use a common core vocabulary to talk about Safe School issues, that vocabulary must be fine-tuned and adapted to the different age groups (4-13) and to changes in outside influences on children's thinking and language (e.g., television, movies, computers and other technology).

In addition, two other compelling findings have helped us think about age- and gender-related issues.

On questionnaires in which we posed a hypothetical scenario ("imagine someone calls you bad names in front of others", students' open-ended responses showed that by sixth grade, none of the children wanted to tell anyone about such incidents. Students explained that conveying their anxieties and worries would be a sign of weakness. As a result, it may be useful to teach older students cognitive or internal coping strategies.

Another important issue that became clear as a result of our observations is that although boys and girls engage in different types of put-downs and respond to put-downs differently, they are equally affected by the incidents. According to our observations, girls generally convey their feelings and show they are distressed, often telling the instigator they do not like what he or she said, or going to a friend for support. Boys generally do not show much emotion and do not seem to go to anyone. But this behavior is in contrast to what we found in the boys' and girls' self-reports of their feelings about the incidents and the effect on their moods, which showed no gender differ-

continued on page 7

Safe Schools

continued from page 6

ences. Hence, although observers might conclude that put-downs do not affect boys as much as they affect girls, based on the students' self reports, the incidents affect them equally. This is important information for the program, and for educators and parents working to alleviate tensions before they escalate.

A Healthy and Safe Learning Environment for All Children

The Safe School approach is based on the conviction that by teaching children skills for dealing with harassment and mediating con-

flict, we can prevent violence in the long run. Altering the culture of the school and involving all children, as well as the adults who teach them, helps to create an optimal learning environment in which children can learn free of fear, concern or worry about their physical and psychological safety. Only when all children feel safe and *are* safe in their schools will we be able to offer truly equitable opportunities for learning and living without fear.

Adrienne Nishina is a doctoral student and Jaana Juvonen is a professor in the UCLA Psychology department. Ann dela Sota is a demonstration teacher and health specialist at Corinne A. Seeds University Elementary School.

Typical Violence Prevention

continued from page 3

2 Punishment sometimes increases resentment toward and disengagement from the school community, and it is likely to *decrease* the child's commitment to adhere to school rules.

3 Punishment strategies do not educate youth about the effects of their behavior or teach them about alternative strategies to deal with conflict. The absence of education and explicit instruction makes it likely that the child will act aggressively again.

4 The punishment tends to focus predominately on physical aggression, which is most often perpetrated by boys, while hostile verbal comments, which may eventually lead to physical aggression and almost always engender bad feelings, are left unnoticed.

A policy of strict punishment targets only one group of children and a specific form of aggression. It also relies on false assumptions regarding the fear of punishment, and it does not provide solutions or alternative behaviors for students who behave aggressively.

Interventions for Aggressive Children. A second approach to school violence is to intervene with the most aggressive students. Research has found such interventions to be effective in teaching aggressive youth anger management skills, prosocial social skills, and conflict resolution tactics. These interventions are better than the punishment practices described above.

However, only a small portion of students can receive the intervention because of the staff time and expertise needed to carry them out. Some of the programs are clearly too short to constitute a change in behavioral patterns. Additionally, studies have shown that the positive effects of the programs are not always maintained over time. There are also other reasons for these programs' limited success. One reason is that students who are aggressive tend to affiliate with similar others. It is very difficult to change the aggressive behavioral tendency of a child if the child continues to affiliate with peers who are also aggressive or encourage hostile behavior. Moreover, the new skills of the aggressive youth are likely to be ignored by others because the reputations of these children often continue to influence their social interactions with peers and teachers. Finally, these interventions are again targeted mostly at boys and physical aggression; hence, they are limited in scope from the outset.

Educational Programs on Bullying. A third common approach to create safe schools has been the use of educational workshops or short-term units that inform teachers, children, or both about what constitutes bullying and why it is a problem. Previous research in the fields of drug and suicide prevention, and the prevention of risky sexual behavior, suggest that these types of modular lessons do little to change students' attitudes, let alone modify actual future behavior. They are too brief and too disconnected from children's everyday lives and social conflicts. It is surprising how popular these modular lessons and

continued on page 8

What Is the Best Age for Kindergarten?

by Tricia Valeski

The best age for children to enter kindergarten has long been the subject of debate between parents, educators, and policy-makers. Two current trends make the issue even more salient today.

1 Schools and legislators are under increased pressure to raise children's achievement:

Some suggest that requiring children to be a little older before entering kindergarten may help ensure that they are ready to meet the challenges of an academic curriculum. Accordingly, many states have increased the age requirement. In most cases children must be 5 by September 1; in one state the cut-off date is as early as June 1.

2 More parents (approximately 10% according to national statistics) are holding their children out of school until they are a year older:

Most of these parents say they are concerned that their child is not mature enough to begin kindergarten, and fear that their child will be unhappy or will not perform well. Interestingly, parents are more likely to hold their boys out of school than their girls.

Although children do develop intellectual and social skills as they get older, there is no consistent

evidence to support benefits of late or delayed school entry. Researchers who have compared the school achievement of children who began school relatively young versus relatively old have found either no differences or only modest initial benefits for older children. In most studies these differences disappeared after the first few grades of school. A study we conducted here at UES produced similar findings.

What We Did

We compared the academic performance of children who entered kindergarten at different ages. Children were divided into four groups:

Youngest group — children who turned 5 between September and December of the year they entered kindergarten

Young-middle group — children who turned 5 between May and August of the year they entered kindergarten

Older-middle group — children who turned 5 between January and April of the year they entered kindergarten

Older group — children who turned 5 between September and December (of the previous year).

We then compared the academic performance of these groups within each grade using (1) TIMSS assessment

Typical Violence Prevention

continued from page 7

workshops are, given what is known about their limited effects on learning and behavior. After all, educators would hardly expect children to be able to apply fractions or use a computer in their everyday lives after only a few lessons of instruction! As with all complex skills, children cannot be expected to change their behavior after a few hours or even a few days of instruction and no hands-on practice.

Although the educational programs describe the consequences of physical aggression and harassment for the targets, they do not typically teach children what they can do to deal with bullying. The punishment and aggression intervention approaches to violence do not teach strategies to children who are on the receiving end of peer harassment. There are at least two reasons

for this oversight. Targeted children are often timid, insecure, and withdrawn. They are not “causing trouble” or disturbing the class, like those students who are aggressive and impulsive. Hence, they do not pose management problems as do those who are hostile toward peers. Furthermore, it is difficult to conduct interventions for those who are targets of peer harassment because they are already stigmatized within their peer collectives as “cry babies,” “wimps,” or “sissies.” This stigmatization may also explain why these children feel reluctant to seek help or tell anyone about getting bullied. Although the targets of peer intimidation would clearly benefit from support and explicit instruction on strategies that can prevent or decrease harassment, the personal cost of further stigmatization is too high. Thus, we need to expand and further develop educational programs that do not single out a few students but educate and support *all* children.

Kindergarten

continued from page 8

scores (Fall, 1999), which reflect children's math computation and word problem solving skills; and (2) Stanford Nine assessment scores (Spring, 1999), which reflect children's math and literacy skills. (See the chart for a summary of performance averages.)

What We Found

In our study there were no significant differences in the academic performance of children who entered kindergarten relatively early versus those who entered relatively late. These findings were consistent across all grades.

Our findings suggest that delaying the age at which a child enters kindergarten is not likely to result in improved achievement test scores; and children who enter kindergarten at a relatively young age are not likely to suffer from poor academic achievement as a consequence. Although decisions about individual children need to be based on specific information about each child's skills and needs, the child's age relative to his or her classmates is not as significant as some might think.

Tricia Valeski is director of research at the Urban Education Studies Center.

DOES KINDERGARTEN AGE MAKE A DIFFERENCE?

Stanford-9 Partial Battery:

	Youngest	Young Middle	Older Middle	Older
Second grade	6.50	6.11	7.06	6.15
Third grade	6.80	5.94	6.00	5.89
Fourth grade	6.50	6.21	6.33	6.57
Fifth grade	7.00	7.38	6.78	6.38
Sixth grade	6.71	6.83	6.85	7.00

Note: This summary score was used because there were no significant differences in any of the Stanford-9 subtests for any grade.

TIMSS Assessment – Total Computation:

	Youngest	Young Middle	Older Middle	Older
Kindergarten	8.00	9.43	11.13	11.29
First grade	—	15.22	15.65	16.82
Second grade	—	17.88	20.00	21.25
Third grade	31.50	23.35	26.19	24.60
Fourth grade	36.00	35.80	35.79	37.38
Fifth grade	48.43	46.86	47.59	49.13
Sixth grade	53.33	54.13	53.79	52.44

TIMSS Assessment – Total Word Problems:

	Youngest	Young Middle	Older Middle	Older
Kindergarten	2.00	1.93	2.53	1.77
First grade	—	3.88	4.09	5.12
Second grade	—	7.12	8.19	8.42
Third grade	11.00	9.00	11.88	10.14
Fourth grade	12.60	13.40	13.29	13.19
Fifth grade	16.43	15.71	16.50	16.20
Sixth grade	16.33	17.33	17.21	17.40

Information Management

continued from front cover

the web or a printed source, is relevant to their research?

- How can we assure that what students acquire from the web is balanced with other resources?
- How can we keep students focused on their search for information that addresses their research question?

We recognized that what we needed to do was develop a strategy, embedded with essential skills, that answered our questions and prepared our students and teachers to participate successfully in this knowledge revolution.

With the help of a grant from the University of California Office of the President, we set out to

research information literacy and develop a curriculum in collaboration with our research partner, McKinley Elementary School in the Santa Monica-Malibu Unified School District.

We began with an extensive review of the existing literature on information literacy. All these sources discussed the necessity for being able to find, evaluate and use information, but none of them fit our needs. To determine what a strategy that dealt with abundant information might look like for students in a Pre-Kindergarten through 12th-Grade learning environment, we took ourselves, as a group, through the process. This helped us establish a baseline for what needed to be included if students were to go

continued on page 10

Information Management

continued from page 9

through a similar process. Our aim was both to guide students and give them tools to become self-regulated learners.

As we dealt with the issue of developing research questions, we talked about the fact that children tend to pose mundane questions and we looked for strategies to help them deepen their inquiry. Using Bloom's Taxonomy, we introduced the concept of inch, foot and yard questions. An inch question requires basic recall; a foot question requires comprehension; and a yard question requires the respondent to synthesize information. In naming and categorizing these types of questions we hoped to give students a guide for evaluating their questions on their own.

We then began to create lessons that would address the essential skills students need to be successful with the process. These essential skills are embedded in the lessons and done in the context of units so that they have meaning. For example, a lesson within the unit on Identifying and Collecting asks students to identify keywords, synonyms and key phrases for their research topic. A question such as "How do whales care for their young?" might yield synonyms such as: cetacean, offspring, calves and babies, all of which can be used in a search.

Other essential skills include highlighting within a reference only the information that answers the research question; taking notes in bullet form, rather than including extraneous information; and filling out resource evaluation sheets.

In addition to guiding students and making an overwhelming task more manageable, these essential skills lessons provide evidence to the teacher of whether and how well children are going through the process. For example, if a student tells a teacher that an article does not give enough information on a topic, the teacher can go to the child's copy of the article and look at what sections and how much of the article the child has highlighted.

Testing the Lessons

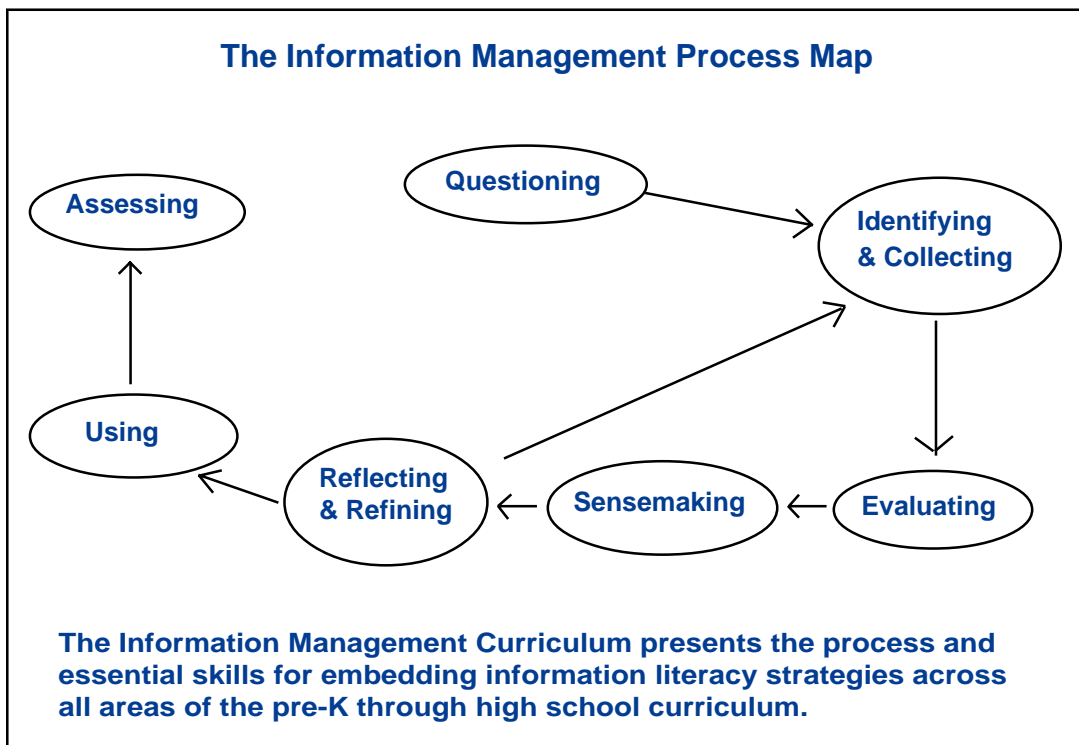
After finishing these lessons and acquiring additional funding, we pilot tested the curriculum with students at neighboring Broadway Elementary School, in the Los Angeles Unified School District. Twenty-three children in the second through fifth grade, all second language learners and part of the 4-H After School Program, participated in a 10-week project to do research on the making of movies. Every Tuesday and Thursday from 3:30 to 5 p.m. these children eagerly participated in our project. They never missed a session, illustrating a determination to learn beyond our wildest imagination. They showed their final product, a HyperStudio stack that presented their findings, to their family and friends

one evening over pizza and soft drinks.

What we learned from the children at Broadway Elementary helped us make adjustments in the curriculum. Specifically, we recognized the need to provide tools to help students decode the meaning in expository text.

For example, the topic of movie making turned out to be quite complex and difficult for the

continued on page 11



Information Management

continued from page 10

children to understand. Even when teachers read the information aloud the students had difficulty retelling it in their own words. Seeking a means to help children simplify and remember the content of such texts, we created flow charts to provide graphic reminders for children as they practiced telling in their own words what an article was about. As a result of this experience, concept mapping, flow charts, T-charts and Venn diagrams became part of our curriculum.

Finally, we presented the draft curriculum to UES teachers and asked them to try weaving it into whatever part of their curriculum they chose, and then give us feedback. We then used this feedback to revise the curriculum during the fall months and had a final product ready for distribution in March of this year.

What Does the Information Management Curriculum Look Like?

Teachers begin by spending a significant amount of time helping children acquire background information on a specific topic. Among the ways they do this are taking them on field trips, sharing reading materials, and providing direct instruction. The time spent doing this is especially important because it allows teachers to balance student-centered learning with understanding concepts and addressing material contained in the curriculum.

Once children have specific background knowledge to decide the direction of their inquiry,

teachers work with them to draft their questions.

Students then categorize their questions and determine the big idea or key concept for each category. These become the big ideas or key concepts that students will use as an organizational framework to understand and utilize the information they gather.

Once research questions have been determined, students progress to the next stage, which is identifying and collecting resources to answer their research questions. Students are taught how to search for information and are encouraged to find resources from a variety of sources (people, places, print, technology, etc.) and to evaluate those resources for relevancy, accuracy, authority and point of view. The evaluation of sources is especially important since the challenge of the Information Age does not involve access to large amounts of information but the rate at which information changes and the widespread availability of invalid information.

During the next stage, sensemaking, students are taught some essential skills. They learn how to scan an article for relevant information and how to color-code or highlight the article so they can effectively take notes from it. Next, we teach them how to take notes in an organized manner. This also includes color-coding note cards by research questions. At this time students are also taught how to cite sources. These sources are included on their note cards so that when they go back to create a bibliography the information is immediately accessible.

Sensemaking is followed by the reflecting and refining stage, which encourages students to look at the

Are you on our mailing list?

Fill out this form to (check one):

add a friend's name add your name make a correction remove your name from our mailing list

Name _____ Preferred Mailing Address:

Street _____ Apt. or Suite # _____

City _____ State _____ ZIP _____

School/Institution _____ Phone () _____

Position _____ Subject areas of interest _____

Mail to: UCLA/UES, CONNECTIONS Editor, Mailbox: 951619, Los Angeles, CA 90095-1619

Information Management

continued from page 11

information they have and reflect on whether they have enough. If they do not, they need to go back and fill in the gaps. If they have too much information, they need to decide what is important to keep and what is not.

Finally, students present what they have learned. This presentation can take one of many forms, such as a HyperStudio or PowerPoint presentation, a play, a poster that depicts how the students gathered and analyzed their research, or a research report.

Leading the Way to New Knowledge

New tools and technology present new challenges to educators. Our process of addressing the challenges presented by the Information Age has resulted in a curriculum that can help prepare prekindergarten through 12th grade students to be successful knowledge users and workers in the 21st century.

Not long ago Steve Wollmer of the National Education Association said, "Education in the next century is going to be about information, how to get it and how to use it." Using the tools that are available to us, we can help students not only acquire these skills, but also use them to solve problems and create new knowledge.

Sharon Sutton is the technology coordinator and a demonstration teacher at Corinne A. Seeds University Elementary School. Judith Kantor is UES's library media specialist.

To order a copy of the Managing Information in a Digital Age Curriculum

send \$24.95 to:

UES/UCLA

Attn: Laura Weishaupt

Box 951619

Los Angeles, CA 90095-1619

Make checks payable to UC Regents

School district purchase orders can be faxed to 310/206.4452

Announcing

the 2000-'01 Managing Information in a Digital Age Conference

In five Saturdays and five follow-up Monday sessions:

- Talk to UES instructors
- Observe in classrooms
- Learn how to make the most of this innovative and effective curriculum

Look for more information in the fall or call 310/825.1325 to request a brochure

CONNECTIONS
UCLA/UESC **EE-15**
Seeds University Elementary School
Box: 951619
Los Angeles, CA 90095-1619

address correction requested

Nonprofit Org.
U.S. Postage
PAID

UCLA