Technology and Young Adolescents: Chance for a Better Future and Source of Anguish

Communications and technology, like atomic energy, are morally neutral. The latter can be used to improve the human condition, or it can have a devastating impact on humankind. Modern computers and their various offshoots also have uses for both good and evil. So much of what we take for granted today was science fiction a generation ago. Our capacity to communicate, entertain ourselves, educate ourselves, travel swiftly and safely, and manage our homes and businesses has greatly expanded since the mid-20th century. Like any powerful resource, electronic technology needs to be handled knowledgeably and with care to maximize its benefits and minimize its dangers.

The dizzying changes in technology force us to constantly reassess the impact on what happens in schools—not just on our practices, but also on our purposes. In November 1997, in a column entitled “They Still Ride Horses, Don’t They?” I raised a number of questions about how computers were altering the basic conceptualizations of literacy. After reflecting on some of the changes computer technology was making in the late 1990s, I drew some comparisons to the impact of Gutenberg’s printing press on human literacy in the 1440s. I then proffered these thoughts and questions:

While I have no clue as to the future of either books or computers, I am quite confident that literacy will not be defined 25, or even 10, years from now as it is today. How will print media be recycled? What role will they play in the life of educated people?

On the other hand, what will “computer literacy” come to mean? I am sure that it will mean something more than “how to operate” a computer. What role will information acquisition, information processing and literature appreciation play in our definition of computer literacy? Indeed, at what point will we drop the word “computer” from the term computer literacy, just as we dropped “horseless” from the term horseless carriage?

What will be the impact on human cognition? Surfing the Internet just as we surf the channels on our TVs is a very different way of encountering the world than turning the pages of a book that we hold in our hands. That which is required of our hands, our eyes, and our brains is different.

In the late 1990s iPods, iPhones, MP3 players, TIVOs, and Blu-Ray DVDs, just to scratch the surface, were not above the horizon yet. At present, older “new” technologies like video games are getting a second look from educators. Once the bane of stressed-out parents lamenting the “wasted” hours game playing, it seems these devices teach valuable cognitive skills. This issue of Middle School Journal explores several ways that new technologies are being used to improve, even redefine, literacy skills in middle school classrooms. Elizabeth Simpson and Frances Clem (p. 4) discuss video games head on. Then Deb Martin (p. 13) focuses on bringing new technologies to bear on basic writing skills. Next the marriage of computer skills and research writing is described by Jan LaBonty and Sandra Williams (p.20). However, as no new technology is without its dark side, Janet Froeschle, Mary Mayorga, Yvette Castillo, and Terry Hargrave (p. 30) offer help in healing the anguish caused by cyberbullying.

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March 2008 Volume 39 Number 4
Video Games in the Middle School Classroom

Elizabeth Simpson & Frances A. Clem

During the fall 2005 semester, an eighth grade teacher in a Laramie, Wyoming, middle school made an urgent plea for more progressive tools for a beginning computers course. Janet Johnson, a veteran teacher returning to the classroom after a hiatus of 10 years, was frustrated with the apparent lack of motivation and engagement by the students. She knew the existing curricular materials were outdated and “mind numbing” and was seeking methods more relevant to this generation.

In response, the school district decided to try a radical departure by helping Ms. Johnson implement a pilot curriculum built around a commercially available video game. The project was conducted as a pilot to design a unit plan supported and anchored by a video game simulation.

Albany County School District in Laramie, Wyoming, has begun to take a hard look at whether teachers’ techniques are sufficiently up to date for today’s learners and whether the teachers know how to integrate new tools to motivate students. This article describes a pilot project to integrate commercially available video games (games that are not primarily intended as learning tools but have inherent learning value, sometimes referred to as “edutainment” games) into a middle school curriculum to hold students’ interest and capitalize on their strengths, while continuing to meet standards.

A new generation of learners

Why are new teaching methods and teaching tools necessary? The current crop of learners differs in significant ways from previous generations because, unlike their predecessors, they have literally grown up “digital.” Several main cognitive style changes have been observed in the digital learner generation (based on Beck & Wade, 2004, Deubel, 2006; Glasser, 1998; Prensky, 2001):

— Digital learners are “on-demand,” autonomous learners, proactive in determining what information they need and seeking it from the environment to meet their own self-determined goals.

— They tend to process information at “twitch speed,” determining what is or is not useful in a matter of seconds, versus conventional speed where information is given, reflected upon, and stored for use at a later date.

— This generation relates to graphics first, versus traditional information acquisition of text first.

— Digital learners tend to learn best through trial and error—random-access versus sequential-direct instruction.

— This generation solves complex problems best within collaborative learning groups, in relevant settings,
rather than acquiring skills through isolated learning activities.

— They are active participants in their learning; they “do” first and ask questions later. Failure is a necessary learning experience. If they fail, they press restart and continue where they left off. They are persistent and goal-oriented.

— Technology is an artifact of their culture. They depend on technology daily to meet their needs. They have developed elaborate communication systems built around this technology, which connects them instantly to any information they may seek; unfortunately, most teachers do not allow them to use these tools in the classroom (Bushweller, 2006).

At the same time the student population is getting harder to teach and motivate with traditional approaches, our teacher population is aging. In the Laramie, Wyoming, school district 61% of teachers are over 45 years old; 43% are over the age of 50. In the U.S., in general, more than 25% of teachers are over age 50; the median age of teachers is 44, according to the National Center for Educational Statistics (2000). These teachers are steeped in valuable content knowledge but need new pedagogical strategies to meet the needs of today’s learners.

Teachers need methods that create what Covey (2004) referred to as win-win outcomes. With win-win accountability, students evaluate themselves as learners, team members, and contributors to the knowledge needed to solve the problem presented. Covey suggested that teachers explain course goals to kids, then give them the basic requirements for reaching those goals and help them come up with their own understanding of what they want to accomplish. What Covey suggested closely resembles the learning strategies students use when learning and playing very complex video games.

Video simulation games as learning tools: Game-based learning

Students’ experience outside of school with commercially available video simulation games gives them an environment in which learning tends to be fast-moving, self-determining, demanding, graphically oriented, proactive, and technology-driven and supported. These experiences tend to guide students’ expectations of learning environments, which poses considerable challenges for educators, especially those who have less digital experience than their students.

Why should experienced teachers modify their curricula to accommodate the needs of digital learners? According to Deubel (2006), the use of video simulation games has great potential in the classroom. “Simply put: It motivates by virtue of being fun. It’s versatile, can be used to teach almost any subject or skill and, when used correctly, is extremely effective. What’s more, its use is supported by constructivist theory, which calls for active engagement and experiential learning” (p. 1).

This should not surprise us. As educators, we know that students learn more if they are actively engaged. Video games are designed to be engaging: 92% of children ages 2–17 play video and computer games (National Institute on Media and the Family, 2001). And middle schoolers are the most avid players; eighth grade boys average 23 hours a week and girls 12 hours, according to a study released in 2004 by Michigan State University. Research shows that motivation yields time on task, and time on task yields learning (Marzano, 2003). Teachers may not realize that simulation video games employ proven instructional practices that increase motivation such as these: allowances for individual differences, active participation, repeated practice, immediate feedback, realistic contexts, relevant goals, and social interaction.

Video simulation games have a number of advantages in the classroom. They allow students to practice skills that would otherwise be too costly or too difficult to implement in the classroom, such as engaging in simulated virtual business activities or medical procedures. They encourage visualization and creativity in finding new ways to deal with a problem or influence a story (Gee, 2003) while still being able to cater to individual learning styles. For example, many games allow the player to adjust the level of difficulty of the play, make choices regarding how the game works or how it appears to the user, even change the language and add new challenges. Gamers refer to this as “modding” the interface and are always checking games for that type of flexibility (Kirriemuir, 2002). Games put the learner in the role of decision maker and push players through ever harder challenges; players learn through trial and error as the games give immediate feedback via specific consequences. The instant feedback and risk-free environment invite exploration and experimentation, stimulating curiosity, discovery learning, and perseverance (Kirriemuir, 2002).

Many teachers may feel that video simulation games are inappropriate to classroom environments due to violence or inappropriate content. But there are many
commercially available video games that are neither violent nor titillating. Examples of such games and the learning content they connect to include:

- Business and Economics: Restaurant Empire™ (Enlight Software), Zoo Empire™ (Enlight Software), Oil Tycoon™ (Global Star, Soft Enterprises), and The Apprentice™ (Legacy Interactive)
- Social Studies: Civilization™ (Sid Meier), Capitalism™ (Enlight Software), Age of Empires™ (MS Game Studios, Ensemble Studios), and Emperor: Rise of the Middle Kingdom™ (Sierra Entertainment)
- Health and Science: 911 Paramedic™ (Legacy Interactive), and Spore™ (Electronic Arts)
- Language arts: The Sims™ (Electronic Arts)

It is important to note that commercially available video games tend to employ far more sophisticated graphics and simulated playing environments than typical educational simulations. They have been developed with large-scale initial investments to compete on the open market. Youngsters are familiar with this degree of sophistication and have come to expect it in games. In fact, the Federation of American Scientists (2006) recently released a report suggesting that “video games can redefine education.”

Why are more of these rich learning environments not being incorporated in the classroom setting? Can they be used to meet the rigorous accountability requirements placed on teachers today? What do teachers need to know to successfully employ these tools in the classroom?

The pilot project

This teaching project was developed to see if commercially available video games could feasibly be used in classrooms to meet Wyoming content standards (see Figure 1). We sought to answer two questions at the student level and two more questions connected to the teaching approach itself.

Questions at the student level:
- Would the use of video games improve student engagement?
- Could students learn effectively from a game-anchored lesson?

Questions about the teaching approach:
- Could teachers use the simulated environment within the game to anchor students’ learning?
- Could game play be connected effectively with content standards?

The authors worked with the teacher, Ms. Johnson, to look at whether the simulation video game, Enlight’s Restaurant Empire™, could be used as a curriculum tool to ground students’ experiences and activities in such a way as to effectively help the class meet state vocational standards.

The researchers were also interested in how the students responded to the use of the game as a teaching tool and what teachers needed to know if they wanted to implement the use of commercial video games in their classrooms.

Figure 1 Rubric based on Wyoming Vocational Standards for Restaurant Empire™

<table>
<thead>
<tr>
<th>Resources</th>
<th>Effective workers know how to allocate time, money, materials, work space, and human resources in both personal and workplace settings.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal Skills</td>
<td>Effective workers can work on teams, teach others, communicate, lead, and work with people from culturally diverse backgrounds.</td>
</tr>
<tr>
<td>Information</td>
<td>Effective workers are expected to identify, assimilate, and integrate information from diverse sources; they prepare, maintain, and interpret quantitative and qualitative records; they convert information from one form to another and are comfortable conveying information, orally and in writing, as the need arises.</td>
</tr>
<tr>
<td>Systems</td>
<td>Effective workers understand social, organizational, and technological systems. They understand how parts of systems are connected, anticipate consequences, monitor and correct performance, and design or improve systems.</td>
</tr>
<tr>
<td>Technology</td>
<td>Effective workers select equipment and tools, apply technology to specific tasks, and maintain and troubleshoot workplace technologies.</td>
</tr>
<tr>
<td>Careers</td>
<td>Career development is the process through which an individual comes to understand his or her interests, knowledge, skills, and aspirations and begins to make informed career decisions. The process consists, at a minimum, of (1) career awareness, (2) career exploration, (3) career planning/decision making, and (4) career preparation. Students develop through a continuum of career awareness, career exploration, and work exposure activities that help them discern their own career paths.</td>
</tr>
</tbody>
</table>
Ms. Johnson’s 12-week beginning computers class was intended to teach MS Word®, spreadsheets, and presentation software. The class included twelve 13- to 14-year-old students. The pilot teaching project replaced three weeks of the regular curriculum with the pilot project, which was designed to meet the same goals, using different tools and methods. During the project, students were put through a lesson using a simulation video game as a tool to ground their learning and meet the vocational education standards. The population consisted of four females and eight males. Three of the males were identified as “at risk,” and one had a learning disability; he usually had an aide accompany him to all of his classes except the class in which we were conducting the study, presumably because the class was very hands-on. Of the females, one was not a native English speaker.

Enlight’s Restaurant Empire™ was chosen because it presented the students with an opportunity to work together in teams to run a business. The game presents this challenge to the player:

Starting with nothing except some cash and a passion for food, build a restaurant from the bottom up—hire waiters, decorate, even cook the meals! Buy, build, out-sell and under-price your competition. (Restaurant Empire™ Players Manual)

**Project procedures**

Prior to beginning the project, we engaged students in an activity to find out what they knew about the restaurant industry as well as what they wanted to know (Figure 2). The students’ experience with the restaurant business varied widely; one student responded that she had worked as a server and bus person in a local restaurant, but the others indicated that they had little experience other than as customers. Ms. Johnson shared with the students that they would be trying something new by bringing in a simulation video game for them to learn the restaurant business while they practiced their computer skills. The students were excited, and immediately the morale of the class changed from disengaged and defiant to upbeat and optimistic.

The unit plan was based on a problem-based learning (PBL) model (Camp, 1996)1 that used Restaurant Empire™ to anchor the skills associated with Wyoming’s Vocational and Career Standards (Figure 1). PBL aligns with constructivist principles and requires authentic, complex tasks. It emphasizes learner “ownership” of the task or problem, the solution, and the process by which the solution is reached. Knowledge is socially negotiated and learners must have opportunities to reflect on both the content learned and the learning process (Savery & Duffy, 1995). Unique in its emphasis on the integral nature of core content and problem solving, PBL learning challenges students to “learn to learn” (Ngeow & Kong, 2001).

The students worked in teams of three students to one game, allowing them to meet the standard for interpersonal skills. Within the teams, students had unique roles for which they were responsible. Each player on a team took one of three roles (Figure 3). All team members kept individual journals regarding their personal performance in their activity and team collaboration.

The game challenges players to plan, design, set up, and successfully run their own restaurant. Almost every possible aspect of running a restaurant is simulated, from hiring staff and deciding on restaurant décor to deciding on menu items and food ingredients, all within a predetermined budget. The lesson design gave the students as much autonomy as possible; direct instruction was driven by the students on demand and only employed when the students had a “need-to-know” barrier to their progress toward running a successful restaurant.

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**Figure 2 Setting a conceptual framework**

<table>
<thead>
<tr>
<th>Activity</th>
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<tbody>
<tr>
<td>Have teams examine their preconceptions regarding the restaurant business.</td>
</tr>
<tr>
<td>— What makes a restaurant successful?</td>
</tr>
<tr>
<td>— What are some jobs that are available within the restaurant business?</td>
</tr>
<tr>
<td>— What has been your experience working in a restaurant?</td>
</tr>
<tr>
<td>— What are some ways in which restaurants can better serve their customers?</td>
</tr>
<tr>
<td>— What is the cost/expense ratio of running a restaurant?</td>
</tr>
<tr>
<td>— Tell me about a restaurant you would like to own and why.</td>
</tr>
<tr>
<td>— What does location and interior/exterior design have to do with whether a restaurant is successful or not?</td>
</tr>
<tr>
<td>— What academic skills are necessary to work in a restaurant?</td>
</tr>
<tr>
<td>— What other kinds of skills are necessary to work in a restaurant? (technology, human relations, specialized skills such as cooking, etc.)</td>
</tr>
</tbody>
</table>
Evaluating learner outcomes

We wanted to know whether students could learn effectively from a game-anchored lesson and whether such a lesson would improve their engagement in the class. A challenge for the project was determining how to assess the learning supported by use of the video game, because commercial video games do not have performance tracking built into them, apart from the players’ or the teams’ scores. However, the results of the game (in terms of the success of the teams’ virtual restaurants) allowed for an independent and objective assessment of the learners’ ability to grasp, absorb, and consolidate the content areas required for both the class and the game. It also gave the teams feedback on whether they were making successful collaborative decisions.

We also used performance-based assessment, meaning assessment of the processes that the teams engaged in during the course of play. Students had to build spreadsheets and presentations to illustrate and support their success in playing the game. The students also kept journals using MS Word®, which provided insight into learners’ ideas and reflections and indicated where learning beyond that expected by the basic curriculum was occurring. The evaluation data (i.e., the PowerPoint presentations, Excel spreadsheets, and MS Word documents) were essentially the same as students would have produced without the game anchoring the lesson; the game provided engaging, motivating content for the tasks.

At the end of the unit, students met with a panel of local restaurateurs. Students prepared and asked the panel questions that would show how well their simulated restaurant experience reflected real-world conditions. Again, the session was taped; students’ questions (“How much of an initial investment did you start with?” “How do you train your employees?” “What kinds of customers were you trying to attract?” “How did you get into the restaurant business?”) clearly demonstrated their increased sophistication regarding the restaurant business.

At the end of the course, students were asked to evaluate their own learning, using a rubric (Figure 1) based on Wyoming vocational standards. They performed a self-assessment of their perceived success in meeting the standards and commented on what features of the games and the lesson approach supported or hindered their success (Figure 4).

Learning with the problem-based approach

I think using video games as a teaching tool makes it fun to learn. The game taught us how to use money which turned into a spread sheet in class. —Hannah, 8th grade

Results from the pilot program were evaluated to assess whether the simulated game environment effectively anchored student learning and connected with state vocational standards. To help answer these questions, the class was videotaped to capture discussions and conversations among students showing their progress in using business tools and software. The videotapes were reviewed to ensure that students were engaged and on task, meeting the standards for teamwork and collaboration.

The pilot confirmed the research regarding the behavior of digital learners. Digital learners are autonomous partners in their learning. Through the student journals, we found the students thought of the video simulation as a shared, collaborative learning experience that related to the standards. For example, Eric, who was very disengaged before the pilot, made connections to the careers standard: “The game taught us how to run a restaurant. It told us what it takes to run a business. I liked the experience and managing the place.”

<table>
<thead>
<tr>
<th>Role Title</th>
<th>Responsibilities</th>
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| Human relations/Customer relations | - Checks customers satisfaction during determined intervals  
|                                 | - Keeps log of customer complaints                    
|                                 | - Does all of the hiring and firing. Must consult with the team but has the ultimate decision  
|                                 | - Keeps a log of who has been hired and fired and the reasons for the actions taken |
| Food manager                   | - Determines the menus                                 
|                                 | - Sets up the kitchen                                 
|                                 | - Makes sure all the food is bought and supplies are filled |
| Finance Manager                | - Sets the spending allowance for each activity based on money available—set at the beginning of the game  
|                                 | - Keeps a spread sheet of how money was spent and money available at the end of game play each day. Could have a laptop with Quicken® and MS Money® to work on during game  
|                                 | - Advises other team members regarding cash flow        |
The standard the students had the most difficulty with was interpersonal skills. When working in teams, they were forced to collaborate in real time before the game could go forward. Often, students working in teams will divide the labor and jigsaw the pieces back together to create a product. Instead, the game forced collaborative decision making. Eric, the same student who was disengaged before the project, noted in his journal, “I learned that working on a team is very hard. It taught me to work with people that work different.”

MAILIN, the only student who had prior experience working in a restaurant wrote: “I learned that working as a team, everyone has different opinions and different ideas. … It helps me to discuss what we all think was better for us and our business.”

Once the students realized they were going to be working in autonomous teams while playing the game, two things happened. First, they started to find the “experts” when they ran into a problem. For example, if one team was not able to make their customers happy, they would ask the other teams what they were doing to raise customer satisfaction and then reevaluate their restaurant against the new information. Second, they became on-demand consumers of knowledge. At one point, two teams simultaneously realized that their spreadsheets were not matching the graphs built into the game. They saw this inconsistency as a learning experience rather than a failure. They also had questions about “revenue,” “expenditures,” “gross profit,” and “net profit.” It was a teachable moment—exciting for both teacher and students. Following this discussion, the students went back to the computer and began the game from scratch (their decision) so they could follow the money trail more closely.

JESSIE, a self-identified over-achiever who is an excellent “traditional” student, probably took the longest in making the connection between learning and the game. She noted in her journal:

In this class my goal starting out was to get good grades like in every other class. But after a week, I started wanting to make the restaurant better, but I held that back. … You and your group have to manage the money, the people, food, employees, and so on. I am not sure what everybody thought about it but I thought it was all good. I learned that I do not want to be a business owner!

Teaching teachers to use video games in the classroom
Can video game simulations be effectively used as teaching tools in today’s classrooms? Do they provide engagement, excitement, and problem-solving environments that will benefit today’s digital learners? Our project showed the answer is yes. However, we found that there are several things teachers need to know before incorporating video simulations into their curricular tools.

Set expectations: Video simulations offer immersive environments, which are designed to allow for trial and error learning, moving the student from novice understanding toward expert understanding within the content domain. Teachers need to let the students know what...
standards are being addressed and why the simulation game environment is most appropriate for learning those standards. Because group work is a vital component of problem-based learning, teachers must set students’ expectations regarding individual responsibility for problem-solving and group roles. Teachers must also identify their own role as a content area resource that the students can draw upon as needed. As with any new teaching methodology, we suggest that parents be carefully informed regarding the purpose and scope of the video simulation use in the classroom.

**Anticipate on-demand learning moments.** Clearly teachers must be expert in the content area that the video simulation will anchor, but they do not need to be highly expert in the use of the game itself. The game experts will emerge among the students. The teacher must be well prepared to teach the underlying content that is required by the game. The students will tell you when they need domain-specific knowledge to move forward in their understanding. For example, the students in the study needed to understand why the profit/loss graphs in the game did not match their spreadsheets, even though they had kept meticulous records of spending as they built their restaurant and were recording all of their income once the restaurant opened. The teacher used their question to insert an on-demand lesson on gross and net profit and loss, a concept the students had not considered. Teachers can prepare themselves for such “teachable moments” by researching the game content and components at Web sites such as those found in Figure 6.

**Make sure you have the structure and support to keep students on task.** The game is likely to be so engaging for students that they may have trouble waiting to start playing or putting it away at the end of the class. Due to the individualized nature of the game play, students need to know and understand goals and objectives before they begin, which means that the teacher must have all the activities lined up, with the relevant standards and assessments determined, before play begins. It is critical to be sure the school’s IT expert is involved as well. His or her support will save much time and effort in installing, testing, and saving game results. If you have not tried using video games as teaching tools previously, it can be helpful to work in tandem with someone who has. This will help you avoid pitfalls, stay on track, and stay on schedule with your curriculum.

**Couple core course content tightly to the simulations and structure it into learning modules.** Be very clear about which aspects or phases of the game will meet specific standards and what assessments will show that the standards have been met. Simply playing the game is not sufficient; students must produce specific results in the form of reports, tables, graphs, and quizzes appropriate to the assessment method chosen. Background knowledge and parallel learning experiences required for the simulation that connect the learning experience to one or more standards should be structured into the learning unit or lesson plan, with associated activities and assessments. For example, the standards behind the use of the unit using *Restaurant Empire™* also required knowledge of different types of business organizations such as sole proprietorship, partnership, and corporations. The information was not inherent in the game but was needed to meet the standards. Setting this information out as a separate discussion and having students write a short report on why they chose a specific organization type for their restaurant made meeting the standards more overt.

**Ask your school to provide information or training to your colleagues.** Every teacher needs collegial support. Having your colleagues understand what you are doing and appreciate your innovations is important. Ask your school to support you by making sure your colleagues understand how video simulations can be powerful teaching tools.

**Figure 5 Sources of information about video simulation games**

At the Albany County School District, the results of the middle school video game pilot study were so positive that we next tried the approach in a high school economics class. Again, the results were positive in meeting standards effectively. Based on these two pilots, the district offered a summer course to all teachers focused on integrating video games into classroom curricula. Funded by a Wyoming Teacher Quality Enhancement grant, the one-week, 20-hour course
focused on helping teachers learn about a variety of age-appropriate video games, how to use them as teaching tools, methods for connecting them to standards and existing curricula, and how to assess learning from them. Ninety percent of the 38 teachers involved said they were planning on trying video games in their classrooms in the near future.

Commercial video game simulations can add fun and excitement to any curriculum. They are a powerful tool for allowing learners to enter a complex and fascinating world that will help them learn more and more effectively—and that is a solid “win” for all concerned.

Editor's Note
Two recent articles in Middle School Journal (January and May 2007) explored problem-based or case-based learning.

References


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Using Middle School Journal for Professional Development
To get great ideas for using this article for staff development visit www.nmsa.org and click on “Professional Development” then “Using MSJ for Professional Development,” March 2008 issue.
Dear Judy:

Going through my “must read” file, I found a copy of your article which had been given to me by my middle school principal, Mrs. Tammy Wolicki. I read it with much excitement! I underlined and highlighted, and I intend to reread the selection before sharing bits and pieces with my sixth graders. For about 15 years I taught fourth and fifth grades, always using cooperative learning. When I started in the Greensburg Salem School District in 1990, our staff received training in cooperative learning. I cannot imagine teaching without it. Each year I explain the “whys” of cooperative learning to my students, emphasizing the need for developing people skills. In addition, I have pointed out the reasoning behind my antics: What we learn with pleasure and strong emotion, we never forget.

Now I can share your information regarding brain studies—information I have never read before. What a remarkable collection of information. Oh, to be one of your students!

Most sincerely,

Marlene Hizer
6th Gr. Science/Social Studies
Greensburg Salem Middle School
Greensburg, PA
The Authors Gallery: A Meaningful Integration of Technology and Writing

Deb Martin

At the front of the darkened computer lab, the LCD projector ticked through larger-than-life action shots of eighth graders writing—in groups, alone, using pencils, lap tops, chewed up pens, and chalk. A high-tech glow reflected in the visitors’ faces as they moved from computer to computer in a quiet, art gallery shuffle. Some pausing, some pulling out chairs to sit for deeper reading, a few visitors shared remarks in hushed tones, while others scrolled down to the bottom of the screens to type in comments to the authors. The focus of their trained attention was on student writings—essays, memoirs, short stories, and descriptions—displayed on individual computer screens, each computer a project featuring a framed photograph of the author punctuated with a colorful title (See an example of student Joe Block’s work in Figure 1. Some graphics have been altered for space limitations).

Parents approached me with their impressions:
— “I never knew my son felt so strongly about our dog.”
— “Wow, these kids have a lot of deep thoughts.”

From their comments it was apparent that, while the photos and general buzz around the computer lab may have pulled them in, the writing was what astonished them.

This parents night activity was much more than a display of student writing. The “authors gallery” demonstrated what many teachers know to be true: Creating challenging and rewarding learning activities at the middle school level means placing computers and writing in a social context, emphasizing the meaningful integration of text and graphics, and encouraging writing projects aimed at authentic purposes.

In this article I first explain what an authors gallery is and suggest additional uses and modifications. Next, readers are taken through a day-by-day description of creating the gallery while having the theory behind this pedagogical choice explained. The step-by-step discussion is supported with student examples and concepts drawn from social construction and multimodal discourse theory. From invention and drafting strategies, we move to revising and editing activities used to get the texts in top shape, ending with a discussion of evaluating student writing and the benefits of student reflection.

The gallery features student narratives, WordArt titles (decorative text features such as adding colors and shapes, shadowing, stretching, and rotating), three dimensional frames, and digitally enhanced photos of the student authors. This activity is easily completed in one week. It can be done with limited word processing experience and, in fact, can serve as an introduction to computers, putting basic skills to work and computer protocols in place in a way that is productive and

This article reflects the following This We Believe characteristics: Students engaged in active learning — An inviting, supportive, and safe environment — Multiple learning and teaching approaches that respond to student diversity
meaningful. I have used the project as a middle school interactive parents night exhibit where parents browse works on the computer screens and are invited to write comments or questions for the authors. The concept is simple, yet achieves many important pedagogical, technical, and community-building goals.

Getting started

The authors gallery project detailed here can be a manageable starting point for teachers seeking to integrate more technology into their curricula. All it takes is a digital camera; a computer lab with a basic software package; a flash drive or similar portable means to transfer photos from the camera to the computer; and a willingness to be amazed by what students can do when allowed the time, resources, and a clear understanding of the task.

On Monday, the first day, I asked my eighth graders to think of possibilities. “Each of you will have a computer from which to display your work. We have a camera and five days. The point of parents night is to showcase your talent.”

In the attempt to stimulate writing, teachers will need to decide whether or not to use prompts. Using prompts gets students writing quickly, but more effort is needed in revision to make each piece unique—an important consideration in keeping the audience engaged. One prompt I have used that seems to lessen the problem of cookie cutter responses asks students to: Write about a time when you could not make up your mind. Students have a surprising variety of experiences with ambivalence, are familiar with the narrative genre, and know to focus the story on a particular moment and its resolution. But no single prompt is perfect.

The role of the teacher in the invention or selection stage is to encourage individuality while conveying to students the constraints of this particular writing context. For example, the writing will be displayed at a parents night exhibit and should appeal to that audience. The pieces will be necessarily short or offer discrete sections to allow guests time to read several projects. In the student example presented in Figure 1, Joe Block understood the audience to be a group of adults interested in writing. Accordingly, he chose a creative portrayal of a well-known literary figure, Edgar Allen Poe. Joe stated, “I find that in order to make it interesting, true stories just need a little fiction.”

Teachers could suggest a broad theme, for example, the meaning of success, and have students prewrite in multiple genres. Sudden fiction, description, narrative, poetry, essay, tributes, and memoir all work well, especially in combination throughout the exhibit. In my experience, students often write narratives about something in their lives that is important. Titles from my classes have included A Weekend at the Races by Mark Daniels, Fifty Years from Now by Shamika Turner, and Tupac Lives by Abu Anoyke.

Based on an understanding of audience and purpose, some students preferred to focus on particular aspects of their lives such as an interest or an activity, while others chose to share a past experience or thoughts of the future or to write a tribute to a legend. If students have a “works in progress” folder over the semester or entire year, they could look there for a suitable starting point. No matter the prewriting strategy, discussing with students beforehand the purpose, audience, and publishing venue helps them make good decisions concerning topic and content.

Integrating process in an electronic environment

Monday we had discussed the project and decided on topics. Tuesday we met in the computer lab. Students knew they had four days of computer time to complete the project. Tuesday and Wednesday in the lab they did what they felt needed to be done to create the best project possible in the time available. Writing groups convened on an “as needed” basis. With a “drop dead” due date
of Friday, we were in true workshop mode. That freed me to snap the photographs, troubleshoot technology problems, respond to questions, and drop in on small-group sessions. I also conducted short presentations on using WordArt and importing graphics.

Whether using pencil or computer, inventing, drafting, arranging, and editing occur for most writers in a recursive fashion. Often, we teachers recognize these elements of the writing process but fail to put them in the context best suited to individual writers, instead insisting all students stay together in their progress toward completion. This project, by design, is collaborative, fluid, and interactive, providing an opportunity to compose, revise, and edit when needed.

Providing a recursive flow is vital, according to Kinneavy (1994). As he admonished, “Process so enthroned and separated from any relation to a final product can be as meaningless as grammar or vocabulary taught in isolation from the actual writing” (p. 8). Try discussing with students the overall parameters of the project, exactly what is expected from them in terms of time on task and the final product, and then allow them the opportunity to hone their own composing processes and approaches on the computer.

Similar to paper and pencil composing, big picture concerns—organization, content, and the writer’s intent—are more successfully addressed in small-group sessions. Unlike paper and pencil composition, conferencing necessarily includes discussion centered around the computer. Early in the process, student talk turns to font choice, sizing and placing of the photograph, and the style of the WordArt title, as these visual elements combine with the text to convey meaning. The meaningful interaction of visual design with verbal expression becomes a first concern, not one left to the last day’s final spit shine. By observing students in various writing environments, Matthewman and Triggs (2004) have determined that, as students shift from traditional paper and pencil composition to composing in electronic spaces, their time spent on the interaction of text and visuals increases, they ask more questions concerning the overall task, and are eager to understand the capabilities of the computer. This inquiry serves to help students make better decisions that produce more effective communication.

When students are working with projects that integrate graphics and text, it is not unusual to see them start with the graphics or deliberate on a font choice then write for a time, until all new ideas are exhausted, work on the photo or title for a time, and then return to the text. After the initial draft, students sometimes change their photograph, recognizing some dissonance between their facial expression and the general tone of the text. Being visual and verbal learners, students know intuitively that both pictures and words combine to make meaning. In this project, the text, the photo and frame, and the WordArt title work together to express meaning.

**Revising and editing**

By Thursday, the fourth day of the project, we were ready to address class-wide concerns and expand our responding groups for more comprehensive feedback. Depending on the level of trust and responsibility extended to peers, student comments on drafts can be handled several ways. Microsoft Word has a “track changes” function and a “comment” feature. Comments can also be written on a sheet of paper next to each computer or typed directly onto a copy of the document on the screen using a different font or font color to distinguish comments from the text. One reason for a separate comment sheet is that it keeps accidents from happening. It keeps peers from inadvertently erasing entire manuscripts or otherwise ruining projects.

An editing technique I call “snaking” can be used in the computer lab to get input from a large number of peers in a relatively short time span. On the command “snake” all students stand up and move to the next computer—much like a conga line. Once seated, students are instructed to look for one specific point of grammar, editing, style, or layout. For example, addressing style, an eighth grade class might first be instructed to suggest one vivid verb to replace a static, state of being verb. After a few minutes, snake again. The next point might address spelling/grammar, for example, correct usage of their/there. Revisiting appropriate and effective font choice, color scheme, or excessive white space is also helpful on group editing day.

For his own sanity and that of his students, Mr. Rosenberry, our lab director, strictly enforced a hands-off policy regarding other students’ keyboards. We wrote snaking points on a sheet of paper folded the long way and placed next to each computer. The students moved, but the paper stayed, collecting comments from different students.
Managing the technology

Creating the document, as well as composing, revising, and editing on the computer, involves learning new skills or at least combining skills in new ways. Even when students know how to import an image file, combining these tasks can sometimes confuse them. Posting explicit steps needed to accomplish the project will help students work more independently. School technical support staff may have available on file a collection of computer protocols—step-by-step instructions for particular tasks—written for students. Directions vary slightly according to the software and the computers being used. A laminated “cheat sheet” taped to each computer station providing sequenced instructions on everything from logging on, saving a file, importing graphics, and printing also works well.

Evaluating: Ownership, interaction, and assessment

As we have seen, the convergence of composition and electronic text changes how teachers design assignments and teach them. Penrod (2005) discussed in Composition in Convergence: The Impact of New Media on Writing Assessment how teachers evaluate and grade electronic text changes. Authentic assessment—as with authentic writing in electronic spaces—occurs when teachers acknowledge and honor student ownership of writing. In other words, teachers cannot have complete control over student writing. Ownership and creative choice are two aspects of writing that get students to buy into the exhibit and make them interested in what their peers are producing.

We must also realize that, in public environments, the judgment of the text comes from the audience of responders. A teacher’s single letter grade loses its significance and impact next to comments from real readers, parents, and friends.

With tears in their eyes, Alicia’s father and aunt hugged her. “You are the writer in our family Alicia. You have such a way with words.” The mediocre grade I anticipated for Alicia could not stand up to the otherwise overwhelmingly positive responses. Had I followed through with giving her a grade unequal to the public feedback she received, it could have caused confusion, animosity, or complete disregard for my views. Although Alicia took big risks in what she decided to share, I knew her writing lacked focus and the sentence structure was simple and repetitive. But something about the sum total of her work kept a crowd around her computer screen that night. I missed identifying what that “something” was but knew then that awarding traditional grades for this project was going to be counterproductive.

In electronic writing, genres such as e-mails, bulletin boards, IM exchanges, and blogs, texts are written to motivate response and to exchange ideas. That is how students know electronic writing to be outside the classroom. A clearly defined sense of audience, ironically, is what distinguishes “real writing” from school-based writing. Attention to audience is an important rhetorical concern that raises the quality of writing. As students come to know the criteria others use in valuing a written text, they get closer to producing more effective communication.

The Monday following the exhibit, I helped the students reflect on the past week. The resulting reflection essay carried the most weight in determining the final grade. The teacher’s primary role in evaluating electronic writing shifts from judge to facilitator of student self-reflection. Students think about their intentions and purposes for writing throughout their writing process and again in light of the responses garnered in snaking and also from the gallery guests. Together we discussed and took notes on questions concerning both process and product.

Questions concerning process included:
— You had many choices to make about what to write. How did you decide on your content?
— What influence did the audience have on your decision?
— What problems did you encounter during writing?
— What part of your writing process worked the best?
— How did the draft change from beginning to end?
— How did you know you were finished revising?
— Who helped you? How?

Besides being part of many state and national standards for learning, technology is central to how our students think and act in the world.
Questions concerning product included:
— What were some of the comments made in response to your writing?
— Which comments surprised you?
— Did any comment make you rethink what you wrote?
— Did most readers "get" what you were trying to communicate? How do you know?
— How did the technology—the word processing, the WordArt, the digital photograph editing software—shape your work?
— Summarize your experience of writing and presenting your work.

From their discussion notes, students wrote an overall response essay. Joe Block’s response essay is displayed in Figure 2.

Theory into practice
The best reason for turning the computer lab into an authors gallery is evident on the proud faces of students and their guests who come to read and share in their lives. The gallery provides the venue for students to give voice to their world. This approach has sound theoretical support as well.

Integrating electronic technology into the writing arts curriculum is more than trendy; it is essential. Besides being part of many state and national standards for learning, technology is central to how our students think and act in the world. In a recent study on the uses and mental conceptions of computers by middle school students, Christie (2005) found that students define the computer in terms of communication, thinking, and fun—ingredients that combine for predictable classroom success. Literacy is central to education. The reality that our students’ multiple literacies are honed and defined on the computer should be a wake up call for teachers to get plugged in, too.

We are gaining an understanding of how modes such as text, sound, graphics, color, and voice act separately and together in new ways to express meaning (Kress & Van Leeuwen, 2001). Understanding and then shaping our students’ intentions in these rich environments is critical for them as communicators, creators, and consumers of meaning. Allowing our students to use these multimodal tools in school gives teachers a chance to hone pedagogical approaches that better integrate new literacies.

This authors gallery project is designed, in part, on the premise that writing, as well as learning, is a social, collaborative, and conversational process (Bruffee, 1993). Writers shape topics to meet real audience expectations. In conferences and snaking they revise and edit together. Another important piece of the social process comes in soliciting responses from the guest readers. Finally, in collaboration with the teacher, the writers reflect on and measure their work.

The social element in learning should be strengthened by the use of new technologies. Contrary to the popular misconception of computer geeks and lonely writers working in isolation, at the fore of educational technology is the call for collaboration. According to Bruffee (1993), “The appropriate use of any educational technology requires … integrating technology with social relationships” (p. 99). Computers in the classroom, if integrated wisely, should cause our students to turn to others in an urge to share work, thoughts, and creativity. The authors gallery meets students where they are, integrating writing and technology in a way that is familiar and consistent with how they know writing to be.

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References

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Through the Raven’s Eyes
— The Death of Edgar Allan Poe

Day 1—Baltimore, Maryland

“I saw a lecture that Edgar Allan Poe gave last night in Richmond,” Jonathan told George as they were walking down random streets, like they usually did. It was very early in the morning and still dark. “He wasn't drunk this time. I think he's improving himself.”

“I highly doubt that Johnny,” George replied. “The pub was probably closed. Besides, what gives him the right to show up drunk at his own lectures?”

“What gives you the right to criticize him? His wife died of tuberculosis.”

“Well I…”

“What? What is it?” That's when he saw what made his friend speechless. There was a man lying unconscious in the middle of the road. George and Jonathan ran as fast as they could toward the closest hospital?

Day 2—Washington College Hospital

Edgar lay on his hospital bed and thought about what happened the previous day. The past few days had been very confusing. “Maybe some fresh morning air will help me think clearly.” He got up and opened the window next to his bed. But when he did, something flew through the window and whacked Edgar in the face. Edgar fell into his bed. The thing that flew through the window was now perched at the foot of the bed. It was a crow, just like the ones that lived outside Edgar's house.

“I'm a spirit. I appear as different things to different people. I'm the person or creature that has no ties to the horrific memories of that specific being. In your case, I'm a crow.”

This explanation calmed Edgar, but it was still difficult to believe this was happening.

“You told me that you enjoyed my stories. So, which one was your favorite?”

“My favorite was The Black Cat,” the crow replied. “I thought it would be my poem The Raven,” Edgar said in a humorous manner.

The crow was very insulted by this. “As I just explained, I look like a crow, but I'm not a crow.”

“Then, what exactly are you?”

“I'm not exactly a crow, though.”

“Wait!” Edgar yelled out. “I'm sorry about my joke, but could you please answer one final question.”

“If you insist,” the crow responded. He flew about the room before landing at the foot of the bed. “Well. What is your question?”

“The crow then flew to the windowsill. “I'll see you in another life.”

“Wait!” Edgar yelled out. “I'm sorry about my joke, but could you please answer one final question.”

“If you insist,” the crow responded. He flew about the room before landing at the foot of the hospital bed. “Well. What is your question?”

“Since you seem to know a great deal about me, can you clarify what happened to me yesterday?”

“Which moment of yesterday are you talking about?”

“Since you seem to know a great deal about me, can you clarify what happened to me yesterday?”

“All of it,” Edgar answered.

“You are going to die in two days, Edgar. That's how you can see spirits like the wolf and me. The wolf is only one of the many demonic spirits that will try to make you suffer while you're on the line of living and dead. I was sent to protect you. Whenever you need me, call my name.”

“The crow then spread his wings and flew out the window. “Wait!” Edgar said, “You never told me your name!”

“It's Reynolds!” he hollered back.
At that moment, Edgar fell back into the bed and fell asleep. Elizabeth, Edgar’s current nurse, had come into the room to check on Edgar’s condition. “Why is he always asleep when I come in?” she thought to herself. “I’m positive that I heard him talking just now.”

Day 3

“Well Edgar, it looks like you have made a full recovery,” Dr. Rodriguez said. “You can go home tomorrow morning.” It was 10:42 PM, and Dr. Rodriguez was making his third checkup that day. Edgar was sitting peacefully in bed. The sky was clear, causing the moon to illuminate the room completely. So Dr. Rodriguez turned off the oil lamp. He was always trying to find ways of saving money.

“Are you sure that I’m okay?” Edgar asked in disbelief.

“According to my examination, you have absolutely nothing wrong with you.”

Edgar was confused. He wondered if he had hallucinated the crow as well as the other things. Edgar remembered Reynolds’ pledge to protect him.

“REYNOLDS, HELP ME!” Edgar screamed. “Edgar, give up, no one can stop us when we want to torture you anyway. You might as well save your energy for your death.” At that moment, Edgar remembered Reynolds’ pledge to protect him.

“REYNOLDS, HELP ME!” Edgar screamed. “Edgar, give up, no one can stop us when we want blood.” The wolf then slashed Edgar’s arm with his claws causing Edgar to scream out in pain.

He managed to yell, “REYNOLDS, PLEASE HELP ME!” At that moment, the crow, Reynolds, flew through the window and landed on Edgar’s head. The wolf lifted his arm to prepare for an attack. Reynolds then pecked Edgar’s forehead, and he passed out. The creatures, the blaze, and the crow had all disappeared.

Dr. Rodriguez came into the room astounded to see Edgar unconscious. “Good job Elizabeth,” he said since he was happy to have saved money by not using the sedative. “What did you do to knock him out?”

“I didn’t do anything. He just passed out.”

Day 4

Edgar condition had worsened. He had a fever of 103 degrees and frequent muscle spasms. “Now it’s unquestionable that I’m dying,” he thought to himself. “Even the doctors don’t know what’s wrong with me.” Edgar started to wheeze. “I’m not surprised that I’m dying like this. It’s just a miserable ending to a miserable life.” As Edgar lay in bed, the door to his room slammed shut and the curtains closed on their own. A thick fog appeared on the ground, and Edgar pleaded, “I pray this isn’t the demonic spirits.” At the side of Edgar’s bed a figure appeared.

“Edgar, the time has come,” Death said solemnly. “Are you ready?”

Reynolds appeared on Death’s shoulder and said, “I’ll see you in another life, Edgar.”

“Goodbye Reynolds.” Edgar turned to Death. “My time is up now.” Death placed his cold skeletal hand on Edgar’s face, and everything faded away.

Epilogue

Edgar Allan Poe died on October 7, 1849. The cause of his death is still unknown today.

Figure 2

Joe’s Response Essay

The only kind of writing I like these days is stories. I find that in order to make it interesting, true stories just need a little fiction. I was assuming that people who are interested in writing would read this so I decided to write about a famous writer, Edgar Allen Poe.

I didn’t really have too many problems with the writing except for the fire alarms going off. Also, the computer crashed and I lost half. I was able to recreate it and even improve it. So, maybe that crash was a good thing.

The draft changed because at first I didn’t expect to have any weird creatures. [But] I wanted to have a character that the readers could relate to in their minds and also through emotions. I kept playing around with that — changing descriptions of the creatures. I added the epilogue to tell that the cause of Poe’s death is still unknown. After I wrote the epilogue I knew I was finished.

My dad gave me feedback twice. He read it when I was almost done and then again at parents’ night. He gave me very good comments. He told me the small details are what made the story so good. I asked him what he thought was the best part. It was not what I thought he would say. When the kids in my writing group read it I could tell by the way they talked that they got what I was trying to do.

Word Art was new to me. I did not know what it could do so I had to play around with it for awhile. I used dark shadowy stuff for the title. My experience with writing and presenting is that at first I worried about how people would accept this. I put in phrases that only I could understand. Then I’d go back and make them smoother. Later I would completely forget about audience and get caught up in the story.
Partnering Peanuts and Word Processors for Research Writing in the Middle Grades

Jan LaBonty & Sandra Williams

Do you know how many peanuts it takes to make a jar of Skippy™ peanut butter? Or who brought peanuts to America? Or whether elephants really do like peanuts? You may not know the answers to these and other goober-related questions, but a group of sixth graders who participated in a class that partnered technology and writing certainly do. For six weeks, middle school students gathered information about peanuts from a variety of text and media sources to create an original informative book, thereby combining goals in both technology and language arts.

By conducting authentic research about one topic for a concentrated period of time, students were able to develop and fine tune their computer skills while honing their abilities with expository writing. When suggesting a means for improving the quantity and quality of students’ writing and a method for enhancing technology skills, research in the value of writing and the values of computers as writing tools is relevant.

Review of related literature

The value of writing
Writing is a vehicle for thinking, and thinking is hard work. Whether we are staring at a blank sheet of paper or a vacant monitor, we know that the thoughts in our heads have to be organized and converted to print before we can actually say we are indeed writing. As challenging as this process may be for writers of all ages, the importance of developing students’ writing skills is evidenced by the National Standards for the English Language Arts (National Council of Teachers of English & International Reading Association, 1996). Of the 12 standards adopted jointly by these two learned societies, four are directly related to writing, the fourth of which links technology to creating and communicating knowledge (Figure 1).

Entire books have been written about the power of writing and various means of teaching it, but five salient features of the value of writing are significant to this writing/technology project. First, writing is a vehicle for thinking. It crystallizes the process of cognition, thereby, providing an avenue for thoughtful consideration of ideas (Wollman-Bonilla, 2000; Jacobs, 2002). Second, writing is intimately connected with reading. Writing improves reading comprehension and enhances retention of new information (Vacca & Vacca, 2005; Stotsky, 1983). Third, writing is uniquely individual. Unlike reading, listening, or watching movies, all “outside in” activities, writing, like talking, comes from within (Edwards, Maloy, & Verlock-O’Loughlin, 2003).
The unique thoughts and experiences of the individual come to life on paper as students learn to take ownership and control of their learning.

Fourth, writing is an effective means of studying. The three stages of memory are enhanced when information is processed at an inferential or conceptual level in writing (Ashcraft, 1994). Our written words become a permanent record of what we think, feel, and know and form our best defense against short attention spans and poor memories.

Fifth, experiences with writing improve the academic achievement of students who struggle. Rhodes and Dudley-Marling (1988) concluded that meaningful, creative experiences with different types of writing strengthened the learning experiences for students diagnosed as either learning disabled or in need of remediation. Krashen (1991) contended that writing in the content areas improved both academic knowledge and the English language skills of ESL students. The power of writing-to-learn in the content areas is readily accepted by the teaching community (Fisher, Frey, & Williams, 2002).

Computers as writing tools

Much as the introduction of typewriters had done decades earlier, the arrival of computers was expected to make dramatic changes, for the better, in writing. Researchers expected students to more readily revise and edit drafts and to be more enthusiastic about the very nature of writing (Heebner, 1988). In addition, it was hoped that students would be more confident as writers and would write more willingly and more frequently (Strictland, 1986). Teachers assumed that word processing features such as spell check and grammar check would improve the mechanics of written work (Jinkerson & Baggett, 1993). Furthermore, as technology shaped society, expectations for expertise with technology skills became part of the academic curriculum. Rather than seeing computers as a means for improving writing, educators and employers agreed that technological skills were valuable in and of themselves. The goal that students would be facile with all components of technology is made clear in the standards published by the International Society for Technology in Education (2000) (See Figure 2).

Nearly 20 years of research with students at a variety of levels has addressed whether computers would, in fact, make students better writers. Enthusiasm for and confidence in writing, quantity and quality of writing, and the mechanics of writing have been assessed using a variety of approaches. Early studies tended to support the premise that students would be more enthusiastic about writing if they could use a word processor for composing (Bruce, Michaels, & Watson-Gegeo, 1985; MacArthur, 1988; Quellmatz, 1989). Some of the most promising research with computers has involved students with

Figure 1 National Standards for the English Language Arts

5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.

6. Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and nonprint texts.

7. Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

8. Students use a variety of technological and informational resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

Source: International Reading Association and National Council of Teachers of English, 1996

Prior to completion of Grade 8 students will:

6. Design, develop, publish, and present products using technology resources that demonstrate and communicate curriculum concepts to audiences inside and outside the classroom.

8. Select and use appropriate tools and technology resources to accomplish a variety of tasks and solve problems.

Source: International Society for Technology Education, 2000

Figure 2 National Educational Technology Standards for Students

Teaching with Technology: A Necessity with a Downside
learning disabilities (Meyer & Ross, 1987). A year-long study of fifth graders with learning disabilities showed positive gains in attitudes toward writing and the quality of the written products (Zhang, 2000).

While studies do tend to confirm the relationship between enthusiasm and confidence in writing and the use of word processors, finding a link between writing quantity and quality and computers has been more challenging. Grafton (1996) reviewed articles related to writing and computers and concluded that “the use of computers by students who possess no more than rudimentary writing and computer skills may be ill advised” (p. 5). Even studies that found a connection between using computers and enthusiasm for writing could not conclude that either the quality or quantity of writing improved (Jackowski-Bartol, 2001; Ross, Smith, & Woodson, 1991). The best anyone could offer was a report of teacher perceptions that students wrote more and wrote longer (Meyer & Rose, 1987; Outhred, 1989) and that students revised and edited more readily (Cochran-Smith, Paris, & Kahn, 1991). However, more recently, Wood (2000) also concluded from her work with elementary teachers that all facets of the writing process—prewriting, drafting, revising, editing, and sharing—are improved with the use of computers.

Have computers helped students with the mechanics of writing? Since word processors are equipped with spell check programs, it was thought that having spelling errors highlighted would help students become better spellers. At the very least, the first step, identifying a misspelled word, would be eliminated. Because children generally identify only 31% of their own spelling errors (Groff, 1979), surely computers would benefit the novice speller. Early research supported this hypothesis. As long as a misspelled word was not recognized by a computer as a real word (e.g., typing ‘piece’ for ‘piece’ rather than typing ‘to’ when one should use ‘too’), computers offered excellent assistance. Jinkerson and Baggett (1993) concluded the obvious, that 20 students in grades three and four knew a word was misspelled when a computer pointed it out for them. Unfortunately, the students in the study who had spelling errors highlighted for them were no better able to correct these errors than those who had to proofread on their own to find errors, nor were they more likely to be able to spell the words later.

Jackowski-Bartol (2001) discovered that spell check helped good spellers but not students identified as poor spellers.

Studies in which students were partnered with adult writers have yielded more promising results. Doering and Beach (2002) paired college students with middle school students who were developing a multigenre writing project involving biography with successful results.

**The project**

A review of the research on writing with computers conducted within the past 20 years reveals one obvious fact: that educators are hoping to show that using technology will make students better writers. Perhaps a better question to ask would be whether experiences with writing will make students more skilled with technology. As demands for technology skills increase, schools will be asked to produce students with these competencies, in spite of the fact that there will be no more time during the school day and little of the emphasis on academics (language arts, science, social science, mathematics) will be diminished. Integrating computer use within the existing curriculum is an obvious solution (McKenna, Labbo, & Reinking, 2004). This experimental class was designed to improve both the research writing and the technology skills of sixth graders in a six-week elective computer class.

Research writing was selected for this project for several reasons. Of the various types of writing students do in school, research or nonfiction writing is given the least emphasis (Evans, 2001). The structure of organizational texts seems to be a particular challenge for students who attempt expository writing (Evans, 2001). Furthermore, students often lack exposure to nonfiction texts during their elementary and middle school years (Evans, 2001). The books that teachers choose to share with students are less likely to be nonfiction. Even though students generally tend to read or write mostly stories or recounts, in the later grades and as adults they are more often asked to write reports, arguments, or factual discussions (Lewis & Wray, 1995).

Since the connections found between reading and writing also supported the use of a book as a focal point of this study (Vacca & Vacca, 2005), *The Life and Times of the Peanut* (Micucci, 1997) was chosen. This nonfiction work contains facts and information about peanuts in an illustrated format, and copies were available for each student.
**Students**
Twenty-five sixth grade students in an elective computer class were involved in the project. The class met daily for 50 minutes, four times a week. Visiting faculty from the university taught writing or technology classes. Students used Fridays with their classroom teacher for independent work on their peanut books. The importance of modeling and mentoring were recognized as components of successful writing experiences (Doering & Beach, 2002; Zhang, 2000), so the professors worked with the classroom teacher to design the class to meet state standards in communication arts and technology. The teacher stayed in the class as a participant-observer for all the class sessions (Gersten & Baker, 1999; Wilson, 1991).

**Class sessions**
A six-week unit on research writing and technology is outlined in Figure 3. Students had basic keyboarding skills, so the technology lessons focused on conducting Internet searches; using more than one search engine; using annotated bibliographies; understanding Boolean operations; evaluating Web sites; selecting and copying addresses and URLs; pasting into a Word document and saving information from the Internet; file management; and editing text.

Writing lessons addressed (a) brainstorming using a K-W-L approach (what I know, what I want to know, and what I learned) designed by Ogle (1992); (b) collecting information; (c) formatting a research report; (d) writing author pages, tables of contents, and indices; (e) and synthesizing information into a narrative format. Focused lessons addressed specific writing skills: writing introductions, conclusions, and transition sentences; paraphrasing; and descriptive writing.

**Getting started**
To introduce the unit on peanuts and research writing, students shelled and ate salted peanuts and brainstormed what they knew about them. They also generated questions for further study. Students were randomly assigned to research/writing groups of four, five, or six based on information from the K-W-L charts. Research topics included the history of peanuts, planting and growing peanuts, characteristics of peanuts, and peanut products. Within each research group was a list of the questions generated during the brainstorming session that would guide the research (e.g., How long does it take to grow peanuts? How many uses for peanuts are there? Do elephants really like peanuts? Who brought peanuts to America?) (See Figure 4). Two additional groups were responsible for the table of contents and the introduction and the conclusion, reference page, and index.

**The technology lessons**
The technology lessons began in the library. Using reference books on peanuts, the students took handwritten notes on information pertinent to their topic for possible inclusion in the final book. Next, the students explored means of using computers to search for, retrieve, and organize information. To help them better understand effective search strategies, one of the university professors previewed two search engines/directories for the class and demonstrated how each worked and modeled the use of Boolean operators.

Students then worked in groups to become experts on one assigned search engine/directory (e.g., Ask Jeeves, Yahooligans, Google) using their assigned peanut-related topics. They completed the WebMac Junior (Arnone & Small, 1999), which includes a Likert scale for a series of questions (Was this an interesting or fun Web site to explore? Did this Web site have links to other interesting or useful Web sites?).

Using a Jigsaw method (Aronson, 1978), each student then moved to another group to share his or her opinions of the search engine his or her group researched. For example, the group studying the history of peanuts evaluated Ask Jeeves and completed the Web site Investigator; then, each of them moved to one of the other research groups to share their evaluations. Students in the other groups also traded so that the second Jigsaw groups had one member from each research group sharing an evaluation of a specific search engine/directory.

Referencing is a challenge for students at any level, and attention was given to a standardized method of citing information. Lessons were provided on writing in-text references and copying and pasting URLs into a Word document. In addition, the students wrote their references on 3x5 cards. These cards were then given to the group compiling the index so they could be alphabetized and retyped.
Review lessons were given for making folders and saving and managing files. There was also instruction in how to select, copy, and paste text from the Internet into a document. Separate lessons were conducted on saving images from the Internet; editing, copying, and moving text; and formatting a document.

Students learned how to use QuickList for electronic notetaking in an effort to keep their references current. They practiced editing images using Word and took digital pictures of each other and the entire class for their finished books. Students used Word, Paint, and hand drawing for the covers of their individual books. Research groups learned how to insert relevant graphics into their chapters. Students also added the information from their library research into their documents to learn how to synthesize information from a variety of sources.

The mechanics of writing were given attention as students practiced with spell check and grammar check. Since both of these tools are less than perfect, the college professors also worked with individual students to help them proofread their own writing to find errors. The time-honored technique of reading text backward helped students spot careless typing errors. Students took a class vote to determine both font size and style so that the text of the finished books would be consistent.

The writing lessons
Similar to the technology lessons, the writing lessons also began in the library. To help them make decisions about the books they would produce, the class studied two dozen nonfiction trade books on a variety of topics to determine what qualities they would incorporate into their own books. Students were most impressed with pictures and information presented in chart form and decided that each section of the book would contain both print and non-print information. They chose the format for the table of contents and the index that included color and bulleted headings. The chapter titles would be enclosed in cartoon peanuts. Each group had to include Internet references at the end of its own chapter and supply three research references to the students preparing the bibliography.

In addition, students studied the covers, dedications, and author pages from children’s books. Each student would receive a copy of the book at the conclusion of the project for which they prepared individual covers, dedication pages, and author pages (complete with a photo). These class books would become reference tools for students.

As a group, students chose the order in which information would be presented for the class book: History of the Peanut, Characteristics of Peanuts, Planting and Growing, and Peanut Products. The students writing the introduction and conclusion decided to include the calorie count for various peanut butters and a recipe for a Skippy smoothie. There were two pages of “Fun Facts.” The class designed a survey to find out why other middle school students thought peanuts were so addictive and reported the results: of 88 sixth graders, 39% liked the salty outer shell, 13% liked the actual peanut taste, 43% liked both the peanut and the salty outer shell, 5% said other (did not like peanuts, were allergic, or liked the flakey inner shell).

Specific writing lessons were taught that addressed paraphrasing and writing transition sentences and writing introductions and conclusions. To give richness to their research writing, lessons on descriptive writing were also emphasized. Students wrote free verse poetry describing peanuts and used jeweler’s loupes to magnify and study peanuts in detail.

Each student had a calendar for the six-week project and at the end of each class period wrote down what would happen the next day. With two different faculty teaching classes, this organizational tool was very helpful.

Results
The class produced a book on peanuts, and each student was given a copy of the finished product in a spiral notebook. Individually, they designed their own book jacket, title page, dedication page, and author page. Using a digital camera, we took pictures for their author page. The completed books included sections on the four research topics, recipes, trivial facts and information, pictures, and the class survey designed by one of the groups to answer the question: What makes peanuts so addictive?

Punctuation throughout the finished book was typical of young writers: most questions (e.g., “In what season do peanuts grow???”) were followed by at least three questions marks and interesting facts were presented with the enthusiasm of numerous exclamation points (e.g., “Did you know the peanut seed is 26% protein and 46% fat!!!!!!!”).

The inclusion of good descriptive writing was evident in the finished peanut book. For example, the chapter titled “General Characteristics of the Peanuts”
included: “Peanuts have shells because it is protective to the seed inside. Basically it is just like football players wearing their equipment while playing. Or like hockey players while on the ice.”

The question originally asked, “Will writing improve technology skills?” was answered with a tentative yes. The classroom teacher compared the computer skills of this experimental class with her other sixth grade classes and found that the students preparing peanut books were more facile with the technology skills and more able to locate relevant information and include it in their writing. A series of cohesive lessons around one central topic helped students focus so that the finished book was of higher technical quality than the individual projects of the other students. Furthermore, all of the students in the experimental class finished the project; the same could not be said of the other sixth grade classes.

While six weeks is a relatively short period of time for marked improvement in writing, the students had to spend only one class period studying book covers, dedication pages, and author pages to effectively design these book components.

Excerpts

Samples from the finished copy reflected how much the students learned, written in the charming style of sixth graders:

“My dedication goes to my friends and family. Every last one. Even the pets.”

“I dedicate this book to my best friend Dahlia who passed away before her time. This book is for her since the first time we met was at a baseball game where we spent the whole time eating peanuts together.”

“Have you ever wondered if there are peanut farms? Or have you ever wondered where peanuts come from? Well in this book you will find out. There are four different sections: History, Planting and Growing, Characteristics, and Products. There is an index, conclusion, and a table of contents. There are also millions of awesome facts. I hope you enjoy this book.”

“Every year, Americans eat about 800 million pounds of peanut butter. It is not eaten by a lot of old people but mostly by children like me.”

“From what I heard, peanuts do grow wild.”

Figure 3 Life and Times of the Peanut: Class schedule

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“What country is the leader for growing peanuts? You would think that it is America, but it is really China! Who would have guessed, not me!!”

“So now you know about the peanut. So now go be like George W. Carver and go get even more enthused about the peanut.”

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Student responses
When interviewed at the conclusion of the project, students commented on what they had learned: how to paraphrase, how to write better, how to research, and how to cite Web pages. They also indicated that they had learned a lot about peanuts and peanut products and how to do tables of contents and indexes. When asked whether it was easier to gather information from the Internet or from books, the class was evenly divided.

Many students felt that books were easier to read; it was easier to find answers to their questions, not as confusing, and easier to keep information straight. They all agreed that the Internet was quicker but that it was hard to read through so much to find what they wanted; the sites used harder words, it was hard to keep it all straight, and hard to keep track of what you did find.

Students liked having a calendar that showed what we would be doing each day. Since two instructors were teaching on different days, it helped them keep track of what would take place and reduced the time needed at the beginning of each class period to begin the day’s lesson. Students were particularly enthusiastic about writing their own dedications and author pages. The variety of their book covers was impressive.

Paraphrasing and organizing information from the Internet was extremely difficult for the students. Since they had asked specific questions (e.g., “Do elephants like peanuts?”), they found exact replies that did not require them to comprehend and then synthesize information from a variety of sources. Students were overwhelmed by the amount of information available and had difficulties sifting through it to glean what they wanted to know. Typically, information on the Internet is more poorly written than what is contained in a trade book. One of the best ways to improve the writing ability of students is to continually expose them to high-quality writing. When the text they read is mediocre, it is unlikely that their own writing based on that text will be much better.

Even though there were lessons on evaluating information from the Internet, student’s skills with this were weak. Since many of the sites were commercial (Planters Peanuts™, Reese’s™) the information was designed to sell and describe a product rather than judge it. The volume of graphic, pictorial, and textual information was overwhelming to sixth graders, who had difficulty sifting through pages of print.

The faculty members in the school where the project was conducted were enthusiastic about the connections between expository writing and technology and used the format of this experimental class to design a similar six-week project that will become a permanent part of the sixth grade curriculum. As a result of the modeling component of the project, the classroom teacher was able to help her colleagues implement this technology/writing project in their own classes.

Suggestions and lessons learned
1. The writing groups were too large. Working with a partner would have ensured that everyone participated more fully.
2. While students’ skills with the technology goals of the project did increase, they needed much more experience to be proficient.

3. The parts of the books that students created individually (the book jacket, title page, dedication, and author page) were excellent and very creative. On these pages, students successfully incorporated pictures and graphics, and their writing was less stilted and forced. Having students work on their technology skills through expository writing on a topic of their own choosing probably would have produced higher quality writing.

4. Students needed to participate in more creative writing activities embedded in the six-week period that would stretch their imaginations and personalize the writing experience. Even having them summarize the day’s activities in a journal at the conclusion of each period would have helped them connect writing and thinking.

5. McNabb’s (2005) call for lessons that help students read hypertext is indeed valid. The overload of information presented on the Internet through a variety of media and the lack of voice challenges the comprehension skills of readers used to printed text.

Conclusions

Writing is a challenge to most students, and they will only become more proficient if they spend time engaged in purposeful activities. While technology has given writers powerful tools and impressive support, the words on the paper need to be crafted by the individual; there are no shortcuts to success or quick fixes for problems. Computers have eased the physical strain of writing and have made it easy for even beginners to produce high-quality, printed projects. Programs that check grammar and spelling can lend some basic support. The Internet can function as a dedicated research assistant, searching through volumes of print to answer specific questions and unearth obscure facts. The value of a finished product that looks, to young writers, like real, adult work is difficult to measure. All of the students involved in the project were delighted with their own books on peanuts, and, for adolescents who frequently complain about having to produce a one-page paper, this lengthy text was a source of pride.

The burden of composition and the rewards of success or consequences of failure belong to the writer, at any level, who must gather information, ideas, and facts to interpret them through his or her own unique perspective. Through the process of writing, we realize what we think, feel, and ultimately know. Authentic writing is a search, an exploration, and whether we are constructing, reconstructing, or deconstructing, it is a solitary journey. As Mem Fox, noted author of books for children and teachers, likes to say, “Why on earth would I write if I knew what I was going to say?”

Answers to the opening quiz

Oh, and the answers to the introductory questions—it takes about 720 peanuts to make a one-pound jar of peanut butter; most likely, slaves brought peanuts with them from Africa; and yes, elephants do like peanuts!

References


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Strategies to Prevent and Heal the Mental Anguish Caused by Cyberbullying

Janet G. Froeschle, Mary Mayorga, Yvette Castillo, & Terry Hargrave

As counselor educators, we are constantly interviewing middle school counselors to ensure current issues are discussed in our courses. During one such interview, a middle school counselor revealed an alarming conversation she had previously had with a student. The student stated, “I’m really scared about the message I got last night on my computer.” “If it bothers you that much, just don’t log on,” I (interviewed counselor) said. “If I don’t log on, I won’t be able to hang out with my friends,” the girl responded. “Little did I (interviewed counselor) know that this young lady would later attempt suicide due to online bullying.”

Few middle school educators have escaped the numerous warnings regarding face-to-face school bullying. While this threat is certainly real, the more common danger inflicted via technology, cyberbullying, is relatively unknown to teachers and parents. Cyberbullying has moved bullying behaviors from the schoolyard to a worldwide audience. This exposure ensures that students receive the greatest humiliation possible both during and after school. Not surprisingly, research indicates that victims (who are often also bullies) suffer from mental health problems and lowered academic achievement (Hall, 2006; Reiff, 2006; Willard, 2007). The purpose of this article is to enlighten teachers, school administrators, and school counselors about this new technological danger, describe warning signs to help recognize both victims and perpetrators, and detail school- and home-based strategies for preventing cyberbullying and healing those affected by the phenomenon.

Forms of technological victimization

Bullying behavior is not a new phenomenon. Worldwide, children have been known to threaten, harass, and even harm other children perceived as defenseless (Weir, 2001). Nonetheless, new media for victimization have emerged in the form of Internet and cell phone technology.

Cell phone text messaging allows a perpetrator to instantly and constantly harass or threaten the victim. Cell phone cameras offer perpetrators the opportunity to take and spread harmful pictures across the school campus in an instant. Demeaning, humiliating, and slanderous rumors can be spread to large groups using cell phone messages (Paulson, 2003). The aforementioned issues plus new technology that allows...
cell phone users to access the Internet (Altheide, 2004) mean that what was once shared among a few individuals can now be shared instantly with large groups. Middle school educators must understand this new arena of adolescent communication and find ways to help both victims and bullies handle the emotional scars brought on by these behaviors.

Yet, how do teachers know which students need help? The following information can help educators identify students who may be suffering as a result of cyberbullying.

**The perpetrator**

Cyberstalkers and Internet bullies use technology to intimidate and harass in an attempt to gain power over others (Alexy, Burgess, Baker, & Smoyak, 2005; Bocij, 2005). Cyberbullies consist of two types of individuals: social climbers and aggressive harassers. Social climbers use the Internet to expose to denigration those they consider inferior while using bullying as a means to fit in with a particular crowd. Aggressive harassers have been bullied by others and begin to harass other peers as a means of retaliation (Willard, 2006).

Some of the most common media for this deviant behavior include e-mail messages, social networking sites, chat room postings, Web site postings, text messages to the victim and others, and persistent cell phone calls (Alexy, Burgess, Baker, & Smoyak, 2005; Bocij, 2005; Mann & Sutton, 1998; Paulson, 2003).

Perpetrators use the computer as a tool for harassment for several reasons. Anonymity creates a lowered sense of responsibility for one’s actions (Willard, 2006). This decreased feeling of accountability may lead to impulsive behaviors that are heightened by the knowledge that the victim’s suffering will be invisible (Bocij, 2005; Willard, 2006). Douglas and McGarry (2001) stated that people lose part of their identity when corresponding over technological media. This may create a loss of perspective leading to a desensitization of the plight of the victim (Alexy, Burgess, Baker, & Smoyak, 2005).

Those who bully over the Internet showed a deficit in emotional bonding and relationships with parents, were more often female than traditional bullies (www.cyberbully.org; Ybarra & Mitchell, 2004), and were typically older than their peers. Further, Internet bullies used cyberspace more often than their peers (Ybarra & Mitchell, 2004). This may be of particular importance to educators, since research by Kubey, Lavin, and Barrows (2001) found that those who spend much time online (particularly in chat rooms) showed impaired academic performance.

**The victim**

While more research is needed to describe victims of cyberbullying (Alexy, Burgess, Baker, & Smoyak, 2005), the typical cyberstalking victim is a white female (D’Ovidio & Doyle, 2003) who is harassed primarily through e-mail (although a smaller percentage were contacted through chat rooms, message boards, and Web sites) (Alexy, Burgess, Baker, & Smoyak, 2005). Nonetheless, Alexy, Burgess, Baker, and Smoyak (2005) and Wolak, Mitchell, and Finkelhor (2002) found that college aged males experienced cyberstalking more often than females and received threats more often than those who were stalked offline. Many believe adolescents and younger children to be future victims, since the phenomenon is rapidly increasing among youth (Alexy, Burgess, Baker, & Smoyak, 2005; D’Ovidio & Doyle, 2003; Wolak, Mitchell, & Finkelhor, 2002). As a result, school-based programs are crucial if students are to achieve optimum mental health and academic performance.

**Implementing a collaborative program**

Perpetrators, victims, and schools alike suffer the consequences of technological victimization. Bullying and stalking behaviors cause a sense of isolation, fear,
hopelessness, depression, and adjustment problems among victims (Mishna, 2003; Olweus, 1993; Pelligrini, 1998); may increase the risk of delinquent behaviors for perpetrators (Mishna, 2003; Olweus, 1993); and can negatively affect the climate within a school (Espelage, Bosworth, & Simon, 2000). Working collaboratively, classroom teachers, technology teachers, school counselors, law enforcement personnel, and school administrators can implement programs that support the mental health of victims, parents, teachers, and the school as a whole. Following are suggestions for implementation.

1. Monitor student computer use closely within schools and inform parents as to the importance of supervising children at home. First, recognize that filtering software on computers does not ensure these computers cannot be used for harm (Willard, 2007). Even school or library computers can be used as media for cyberbullying, as all Web sites used by teens cannot be blocked. As a result, educators and parents should place computers in a well-trafficked area (both in school and at home). After interviewing many educators, a useful technique that emerged was the installation of mirrors behind each computer. The mirror was placed in a position such that teachers could see each computer screen in the room by simply glancing at the mirror. Many teachers stated that students’ improper Internet use was curtailed by simply knowing adults could see everything on the screen at all times.

Other methods used to monitor Internet use include installing firewalls and software to block tunneling sites. For example, a local firewall can be installed on each school and home computer such that specific Web sites are blocked. In addition, tunneling sites (those that bypass the firewall) can be blocked with the installation of specific software packages. Many of these software packages can block sites containing specific data or words and send an e-mail to parent or teacher addresses when an attempt is made to enter such sites. Specific filtering information and current software packages can be viewed at http://www.kiitv.com/features/computercorner/6507657.html (Computer Corner, 2007).

2. Inform parents of Web sites regularly used by teens and the type of communications displayed. Train parents to use technology so that they can effectively monitor their child’s communications. For example, parents can be taught to create and monitor pages on Web sites such as MyspaceTM and FacebookTM.

3. Integrate a program that teaches social skills and empathy with classroom reading instruction. Hillsberg and Spak (2006), Froeschle (2006), and Salmon (2003) offer specific details or literature lists that aid educators when implementing this strategy. Additional age- and activity-appropriate stories can be found via the California Department of Education’s Recommended Literature Search (2001) at http://www.cde.ca.gov/ci/rl/litsearch.asp by searching under the genre “Realistic Fiction.” The authors listed above contend that identifying with story characters improves the student’s ability to empathize with others (thus decreasing aggressive behaviors) while increasing reading comprehension.

Based on this premise, we suggest the following activity. First, read a story to students. Next, ask students to identify with the perspectives and feelings of the story’s characters. Ask questions such as, “How would you feel if you were this character? How did the way the other characters responded affect this person’s actions?” Finally, students can act out opposing roles in the story and discuss the emotions felt by each character. Students may also be asked to put themselves into the shoes of another entity via personifications. Questions such as, “If you were the (inanimate object or animal) in this story, how might you feel? Would this behavior help make friends or enemies?” Such lessons can be enhanced with collaborative efforts between teachers and school counselors.

4. Involve community and law enforcement personnel in educational endeavors. These professionals can teach about the safe use of the Internet and cell phones as well as discuss legal consequences accompanying stalking and other bullying behaviors. Students need to know the difference between public and private
information as they often post personal, harmful information on Web sites and do not realize the dangers involved.

5. Offer emotional support to cyberbullying victims. For example:
   - Encourage participation in school groups and extracurricular activities that build friendships and heighten self-esteem (Weir, 2001).
   - Assign older empathic students to serve as mentors to victims.
   - Assign adult volunteers to serve as mentors to victims.
   - Recognize that the victim's fears may occur for years. Do not dismiss these feelings as unnecessary or unreasonable (Alexy, Burgess, Baker, & Smoyak, 2005).

6. Create an environment that does not tolerate bullying in any form and encourages mainstream students to reject bad behaviors. Salmivalli (1999) described a program involving three steps. First, educators create awareness by enlightening all students as to the definition of cyberbullying and the importance of not supporting such behaviors. Revealing that individuals often respond differently as a result of peer pressure is an essential part of this guidance lesson. Discussions of expected and unexpected behaviors reveal discrepancies between the students’ behavior and beliefs.

Next, students are encouraged to self-reflect and commit. Olweus (1991) stated that student-created ideas improve overall commitment to anti-bullying programs. As a result, students are asked to identify their actual behavior when exposed to acts of cyberbullying and to brainstorm ways to stop such harmful behaviors. Salmivalli, Kaukiainen, & Voetenit (2005) have advocated the use of role-plays or drama as part of the brainstorming process and stated the importance of improving not only behaviors specific to bullies but those of bystanders and witnesses as well. Role-plays have been found to offer a safe atmosphere to practice responses intended to dissuade cyberbullying.

7. Provide a safe place for bullies to address underlying issues concerning their behaviors. Adult volunteers can become mentors and role models for bullies who need support to overcome improper behaviors. For example, Balkus (2006) discussed a unique mentoring program designed for at-risk students called TeamMates. Students are matched to community members who offer support and guidance. Rayle (2005) interviewed 22 middle school counselors and found that males, in particular, seek out same sex mentors in an effort to receive guidance on issues such as bullying.

For seven years (1998–2005), I was fortunate enough to establish a successful mentoring program within a south Texas middle school. During this time, many students known for bullying behaviors were assigned to same sex mentors with similar interests (as pre-screened) for weekly meetings. Mentors met weekly with the school counselor and were given training on child development, bullying behaviors and strategies to prevent all forms of bullying, information and advice-giving strategies, and child abuse and other relevant laws. Mentors met the following requirements: at least 20 years of age, passed a background check, attended all trainings, and met weekly with students for a minimum of one school year. Mentors were recruited and selected by educators and ranged in age from 20 to 76. At the end of each school year, teachers and school administrators reported on the mentees’ behaviors. Most students were reported as exhibiting a decrease in aggressive behaviors.

8. Involve school counselors as part of the educational team. These professionals can teach behavioral and emotional intelligence skills (skills that assist in getting along with peers and controlling personal emotions) that avert cyberbullying (Aronson, 2000) as part of a guidance curriculum. School counselors can implement counseling groups and peer support groups that seek to empower victims while offering a safe place to express fear; to teach social behaviors that are needed to get along with others; and to build skills that assist with anger management, appropriate assertiveness (Ross, 1996), self-confidence, and self-esteem. In addition, these professionals can teach conflict resolution techniques that are often alternatives to aggression (Ross, 1996) and make referrals to outside agencies as needed.
9. Assign projects that encourage cooperation in lieu of competition. Aronson (2000) discussed a method of assigning classroom projects found to decrease aggression and bullying behavior. A description of his jigsaw method follows: Divide the classroom into groups of four or five students, with each group assigned to research the same major topic. Break major topics into four or five subtopics (one for each group member). Each student compiles research on their individually assigned subtopic. Next, students compare research with class members who have been assigned the same subtopic. Finally, each original group prepares a cumulative report based on individual members’ contributions. This method creates an environment that demands the knowledge, contribution, and cooperation of each student. Further, it builds empathy for others while fostering academic learning.

Harold Wiggs Middle School in El Paso, Texas, implemented the Bilingual Cooperative Integrative Reading and Comprehension Program and Cooperative Integrative Reading and Comprehension Program in 1993 (Calderon, Hertz-Lazarowitz, & Slavin, 1997; Slavin & Fashola, 1998, Stearns, 1999). Students began working together in small groups as opposed to teacher directed individual learning. As the program progressed, compassion and respect learned in the classroom began to infiltrate the entire school and neighborhood. As a result, aggressive behaviors diminished considerably, and test scores improved.

Conclusion

When it comes to technology, adults seem less educated than kids and, therefore, are unaware of many ordinary dangers. Cyberbullies count on an anonymous adult-free environment in which to inflict misery on other students. Working collaboratively, educators, parents, and law enforcement personnel can weaken the control cyberbullies have over victims through education about current technology and victim and bully profiles. Specific programs using reading-empathy instruction, counseling and mentoring programs, peer support programs, and cooperative group assignments are capable of both preventing and countering the pain and school failure caused by cyberbullying.

References


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Four Facets of Reading Comprehension Instruction in the Middle Grades

Michael F. Graves & Lauren Aimonette Liang

Andrea Tate teaches sixth grade in Oak Knob Middle School, a 1960s building in a first-ring suburb of a major city. Although Oak Knob is technically in a suburb, its student population mirrors that of the city it abuts, and the demographics are definitely not what we think of when we hear the word “suburban.” Seventy-two percent of the students are children of color, 65% of them receive free or reduced price lunches, 53% of them are English language learners, 22% of the families are enrolled in an AFDC program, and the mobility index for the district is 32%. A number of the children in the school are markedly behind grade level in reading, and many of them need more help than they are presently getting. Andrea is well aware of her students’ needs. She is also well aware of the substantial Reading First funding being used to support primary grades children, and she wishes that some of that funding were available for her students. At the same time, she realizes that the five-part curriculum that forms the core of Reading First programs—phonemic awareness, phonics, fluency, vocabulary, and comprehension—is far from a perfect match for the needs of her middle school students.

Andrea is quite right in recognizing that many of her students need additional support in reading and that a primary grades curriculum does not fit their needs. In the past five years, at least a half dozen major reports have focused on adolescent literacy and providing adolescents with age-appropriate instruction (Graves, 2006). But what is age-appropriate instruction for middle school students? As recent reports on adolescent literacy such as those of the Carnegie Corporation (Biancarosa & Snow, 2004) and the ACT (2006) make clear, age-appropriate literacy instruction for adolescents includes many components—continuing instruction in vocabulary, a rich writing program, reading in a range of fiction and nonfiction materials, and instruction in a variety of study strategies. Most important, however, it includes a rich comprehension program. Here we describe a program that we believe is appropriate and necessary for virtually all middle school students—those who excel at reading, those who read at the same level as the majority of their peers, and those who struggle with reading.

Comprehension is a complex phenomenon, and comprehension instruction takes many forms. At minimum, we believe it should include at least the following four facets.

This article reflects the following This We Believe characteristics: High expectations for every member of the learning community — Curriculum that is relevant, challenging, integrative, and exploratory — Multiple learning and teaching approaches that respond to student diversity.
— Fostering learning from text
— Nurturing response to literature
— Teaching comprehension strategies
— Promoting higher-order thinking

We are not suggesting that each of these facets is independent. Indeed, the four facets sometimes overlap, and instruction sometimes focuses on more than one of them at the same time. However, considering all four facets as you plan activities increases the likelihood that children will receive the rich and varied comprehension instruction they need. We describe each facet and provide examples of instructional approaches that illustrate its use.

**Fostering learning from text**

Fostering learning from text is the cornerstone of comprehension instruction. As Duffy (2002) recently noted, “fostering learning from text” refers to methods teachers use to assist students in learning the content of individual selections. All middle school teachers—whether they teach science, social studies, English, or health—can and should assist their students in understanding and learning from the many texts they read.

One instructional framework for fostering learning from text that serves as an example of this facet of comprehension instruction is the Scaffolded Reading Experience (SRE) (Graves & Graves, 2003; Fitzgerald & Graves, 2004). This framework is shown in Figure 1. As can be seen, the planning phase of the framework identifies three factors—the reader, the text, and the purposes of the reading. Based on these considerations, the teacher creates a set of prereading, during reading, and postreading activities that will help those particular students successfully read a particular text and achieve a particular purpose or set of purposes.

Shown in Figure 2 are some of the types of activities in which a teacher might engage students before they read a text, as they are reading it, and after they have read it. Of course, a teacher would seldom use all of these activities with any one text. Instead, with the Scaffolded Reading Experience (SRE) framework, the teacher supports students’ reading of a particular text with just those experiences they need to successfully read that text.

<table>
<thead>
<tr>
<th>Prereading Activities</th>
<th>During Reading Activities</th>
<th>Postreading Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivating</td>
<td>Silent Reading</td>
<td>Questioning</td>
</tr>
<tr>
<td>Activating and Building Background Knowledge</td>
<td>Reading to Students</td>
<td>Discussion</td>
</tr>
<tr>
<td>Providing Text-Specific Knowledge</td>
<td>Supported Reading</td>
<td>Writing</td>
</tr>
<tr>
<td>Relating the Reading to Students’ Lives</td>
<td>Oral Reading by Students</td>
<td>Drama</td>
</tr>
<tr>
<td>Preteaching Vocabulary</td>
<td>Modifying the Text</td>
<td>Artistic, Graphic, and Nonverbal Activities</td>
</tr>
<tr>
<td>Preteaching Concepts</td>
<td>Using Students’ Native Language</td>
<td>Application and Outreach Activities</td>
</tr>
<tr>
<td>Prequestioning, Predicting, and Direction Setting</td>
<td>Involving English-Language Learners’ Communities and Families</td>
<td>Building Connections</td>
</tr>
<tr>
<td>Suggesting Strategies</td>
<td></td>
<td>Reteaching</td>
</tr>
<tr>
<td>Using Students’ Native Language</td>
<td></td>
<td>Using Students’ Native Language</td>
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<tr>
<td>Involving English-Language Learners’ Communities and Families</td>
<td></td>
<td>Involving English-Language Learners’ Communities and Families</td>
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</table>

Suppose, for example, that a sixth grade teacher is preparing students to read a chapter on waves, a chapter that he views as both challenging and particularly important. Suppose further that the class includes a number of native Spanish-speaking students whose Spanish is stronger than their English. Figure 3 lists the components of an SRE the teacher might use in this situation.

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**Figure 1** The scaffolded reading experience

**Figure 2** Possible components of a scaffolded reading experience

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This SRE begins, as almost all do, with a motivational activity. Students demonstrate the motion of a wave by arranging themselves in a line across the front of the room and then successively standing up and sitting down—much as fans do at a football game.

**Figure 3** Possible activities to support students’ learning from a chapter on waves

<table>
<thead>
<tr>
<th>Prereading Activities</th>
<th>During Reading Activities</th>
<th>Postreading Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motivating</strong></td>
<td><strong>Reading to Students</strong></td>
<td><strong>Discussion and Writing</strong></td>
</tr>
<tr>
<td>Act out the motion of a wave.</td>
<td>Read the first section of the chapter aloud.</td>
<td>Small groups including English-language learners and native English speakers discuss the chapter.</td>
</tr>
<tr>
<td>Stress the importance of waves.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Preteaching Concepts</strong></td>
<td><strong>Supported Reading</strong></td>
<td><strong>Writing</strong></td>
</tr>
<tr>
<td>Teach the concepts AMPLITUDE and FREQUENCY.</td>
<td>Provide Spanish speaking students with a list of the headings in Spanish.</td>
<td>The same small groups outline the chapter.</td>
</tr>
<tr>
<td><strong>Building Text-Specific Knowledge</strong></td>
<td><strong>Silent Reading</strong></td>
<td><strong>Discussion</strong></td>
</tr>
<tr>
<td>Use the headings in the chapter to preview it.</td>
<td>Students read the chapter independently, calling on the teacher for help if needed.</td>
<td>The class as a whole discusses the major concepts of the chapter.</td>
</tr>
<tr>
<td><strong>Using Students’ Native Language</strong></td>
<td><strong>Reteaching</strong></td>
<td><strong>Writing</strong></td>
</tr>
<tr>
<td>Translate the headings and preview the chapter in Spanish for Spanish speaking students.</td>
<td>Reteach some or all of the students as necessary.</td>
<td>Students in pairs write an imaginative tale in which a wave goes berserk.</td>
</tr>
</tbody>
</table>

Following this demonstration, the teacher points out various attributes of their wave and of waves in general. For example, their wave and all waves are rhythmic and have amplitude and frequency. He explains these two concepts and then has students again demonstrate several different wave forms, changing the amplitude of their wave by raising both hands rather than standing up and changing its duration by standing up and sitting down or raising and lowering their hands at different rates. Finally, he draws several wave forms on the board to illustrate the rhythmic patterns and the different amplitudes and durations waves can have.

Motivating students includes stressing that “waves” is an important science topic, reminding them that they are already familiar with some types of waves, such as those in oceans or lakes, and asking them what other types of waves play parts in their daily lives. Microwaves and TV waves are likely responses.

Next, because the chapter contains some difficult concepts, the teacher preteaches two of the most important ones. These are the concepts of **amplitude** and **frequency**. He begins by writing the words on the board. He then defines each of the concepts. In doing so, he acts out the meaning with gestures and illustrates them on the board. The amplitude of a wave is the height of the wave from its origin to its crest. The frequency of a wave is the number of cycles of the wave that pass through a point in a certain amount of time. After defining the concepts, the teacher reminds students that their own wave had amplitude and frequency; its amplitude was perhaps a foot or two, and its frequency was perhaps ten cycles per minute. Finally, he asks students if they know of other words or phrases that expressed concepts similar to those expressed by amplitude and frequency. Height, size, and how often something happens are possible responses.

To prepare students to deal with both the content and the organization of the chapter, the teacher next writes the heading and subheadings from the chapter on the board, being sure to preserve the features of the text used to show subordination—for example, upper case letters and indentation. He constructs the outline in **both** Spanish and English. Then, he asks students to identify the superordinate and subordinate topics by noting their placement and the type of font used. Finally, he asks students to brainstorm what they can learn just from the headings.

In preparing for the during reading part of the SRE, the teacher first makes an audiotape of the chapter in Spanish. As the first during reading activity, he reads the first section of the chapter aloud to all students to ease them into the chapter. After the first section, students whose Spanish is stronger than their English listen to the tape, and the rest of the class finishes the chapter by reading silently to themselves. Before students begin their listening or reading, the teacher reminds them that...
they should not try to learn everything in the chapter, but should focus their attention on the topics in the outline. He also reminds them that they can ask him for help if they need it.

In deciding on postreading activities, the teacher takes into account the fact that the chapter is challenging and that he definitely wants students to remember the major concepts dealt with in the chapter. He, therefore, hands out a discussion guide that parallels the chapter outline on the board, and he gives students 20 minutes to discuss these concepts in small groups. Each group is asked to focus on a particular concept and to identify one or two important pieces of information about that concept, which they will “teach” to the rest of the class. In forming groups, the teacher is careful to place English language learners in groups with students who will be supportive of their participation. After that, the class comes back together, and each group reports one piece of information they discovered about waves. It is likely that some students will need extra work with concepts such as amplitude and frequency, and the teacher offers to briefly join any groups that would like his help. Finally, as a celebratory activity for students’ hard work, the teacher invites them to work alone or in small groups to create fun and imaginative stories, sketches, or poems about waves. Once students have completed their creations, they present them orally or post them around the room, and the teacher or students summarize what they have learned about waves one last time.

Clearly, the SRE for the waves chapter is a robust set of activities that would demand a significant amount of time and effort from both the teacher and the students. In this case, the time and effort are warranted because the teacher sees this as a difficult and very important topic. Many reading selections do not require such robust instruction. For example, if this same class were reading a much simpler text, perhaps just beginning Anderson’s (1997) *Going Through the Gate* in which a group of sixth graders experience a magical graduation ceremony and actually become animals for a short time, an appropriate SRE would be much briefer and much simpler. In this case, the teacher might activate background knowledge by telling the students the story is a fantasy; motivate students by telling them that, as part of their graduation, these children experience something very exciting and rather frightening; have students read the chapter silently; and then have a class discussion in which students predict what the special ceremony might involve.

As these contrasting examples illustrate, instruction that fosters learning from text will vary tremendously. For further information on SREs and specific examples of varied SRE activities, see Graves and Graves (2003), Fitzgerald and Graves (2004), and Galda and Graves (2007); and for a number of complete and downloadable SREs visit www.onlinereadingresources.com.

**Nurturing response to literature**

Nurturing response to literature, the second facet of the curriculum we are describing, is a critical counterpoint to learning from text. Originating in the pioneering transactional framework of Rosenblatt (1938, 1978), the reader response approach is based on Rosenblatt’s insight that the meaning of a text is created in the transaction that occurs between the text and the reader, within a socio-cultural context and at a particular time and place. She argued that readers bring their own background knowledge and previous experiences to each reading of a text, and that this leads to each reader creating his or her own unique meaning of the text. Her suggestion that there exists more than one interpretation of a literary work and that the teacher’s interpretation (or the one outlined in the text book) might not be the right or only one, though radical at one time, is now a widely accepted notion.

Research on response to literature has demonstrated that different aspects of the reader, the text, and the context influence the response a reader will have to a text. The reader’s level of cognitive development and her or his knowledge about literature (Applebee, 1973) and particular aspects of the style and structure of a text (Booth, 1961) certainly affect the reader’s response to a text, but for students, perhaps the biggest influence is the context within which the text is read. Context—the atmosphere and expectations established in the classroom—is particularly important because of the affect it can have on the stance a reader takes toward a text (Galda & Liang, 2003).

Rosenblatt distinguished between two stances a reader can take when approaching a text. The reader may read with a predominately efferent stance, where the focus is on gathering information from the text, or with a predominately aesthetic stance, where the focus is on the creation occurring during the actual reading—the reader’s engagement in the “virtual experience” of reading the text (Galda & Liang, 2003). Neither the efferent stance nor the aesthetic stance is
more important or in some way better than the other. Moreover, these stances lie on a continuum, and readers typically take a stance somewhere between the two ends. What is important is that readers become proficient at taking an appropriate stance for the text and the task they face in particular reading situations.

Students learn how to take an efferent stance by participating in the sorts of activities we have described in the section of this article on learning from text. Helping them learn to read from an aesthetic stance requires their developing quite different skills and attitudes. Teachers can use a variety of methods to encourage students to respond to literature and read with an aesthetic stance. Open-ended questions in discussions of a piece of literature, open-ended reading logs and journals, and dramatizing, illustrating, and writing in dialogue journals are all useful tools in encouraging students to respond to literature. Teacher modeling of responding in different ways—such as considering the author’s craft, making connections between the text and other texts or one’s own experience, and even comparing others’ responses to one’s own—is also an effective tool for offering students a variety of ways to respond.

One seventh grade teacher we worked with used poetry as a way to encourage students’ use of a variety of ways to respond to literature. She selected the award-winning poetry collection *What Have You Lost?* by Nye (1999) because of its outstanding, provocative poems and its appeal to young adolescent readers. Every day while reading three or four poems from the collection aloud to the class, she would stop a few times and share a response she was having to a particular line. She always began these short models by referring to a particular phrase or line she had read and saying that when she read that section she thought of a certain memory or especially noticed the author’s craft or responded in some other personal way. For example, after reading the last two lines of Butch McElroy’s poem “One,” she commented to the class, “I was really struck by the way the author set the word loneliness apart as one line all by itself. It stood out to me in a way that it would not have if it had been part of a longer line. I felt a wave of sympathy for the distance from others the narrator in the poem was feeling.” The teacher was careful to model several different types of responses on a regular basis. By offering a variety of types of responses and explaining that these responses were happening while she was reading, she encouraged the students to take an aesthetic stance and to talk about the experience they were having while reading and engaging with the poem.

After about a week of doing this, the teacher began having her students listen to the poems with a notebook and pencil in their laps. Every few lines, she would stop and have the students write down a response to the segment that had just been read. Students were asked to first copy down the beginning of the particular line or phrase they were responding to and then write their responses, as a reminder that their responses were grounded in the text and occurring as they read. After a few minutes, several students would be asked to share, and the teacher would encourage the class to recognize the different ways students were responding and consider trying one of these in the future. Occasionally, the students did not write their responses but simply shared verbally with partners, which allowed more students to share and engage in deeper discussions of their responses. For example, after listening to the second-to-last stanza in the poem “Bittersweet,” one student shared this response with his partner: “I really connected to the line ‘sharpened was never the same.’ It reminded me of the time I was in first grade and each of us had to bring in crayons to use in class. I was so excited to bring in my new 64-crayon box with built-in sharpener. But when I tried to sharpen one of the crayons, it broke, and when I put it back in the box, none of the crayons looked as new and fresh—the broken one sort of made all the others look ruined too. I can picture how the author of this poem felt sort of sad about her crayons being used.
and not all crisp-looking anymore, even though she liked using them.”

After the class had worked with their notebooks and shared responses for several days, the students made a wall chart that listed many ways they could respond in writing to a poem or a story while they were reading it. Their list was composed in their own language and included such ideas as “making a connection to another poem I read,” “explaining why I really liked this part,” and “saying how this phrase reminded me of something that happened to me.” When the class started reading the novel Nothing But the Truth (Avi, 1991), the students were asked to respond a few times to each chapter as they were reading and to use a variety of the ways of responding, like they had done with poetry, consulting the wall chart for possibilities, if they needed to.

These experiences encouraged the students to engage actively in literature and poetry while reading it and helped them develop their thinking about the meaning making they were doing while reading, both of which are important and essential goals of comprehension instruction.

**Teaching comprehension strategies**

Teaching comprehension strategies is the third part of the curriculum we are describing. As Pearson, Roehler, Dole, and Duffy (1992) noted a decade and a half ago, comprehension strategies are “conscious and flexible plans that readers apply and adapt to a variety of texts and tasks” (p. 169). Although many strategies have been identified, a handful of them have been repeatedly singled out as particularly useful (See, for example, Pearson, Roehler, Dole, & Duffy, 1992; NICHD, 2000; RAND Reading Study Group, 2002). Here is a list of eight of these frequently identified strategies that we have found useful:

- Using prior knowledge
- Making inferences
- Summarizing
- Imaging and creating visual representations
- Asking and answering questions
- Determining what is important
- Dealing with graphic information
- Monitoring comprehension

Although one could certainly add more strategies to this list, we believe that teaching these eight strategies will provide students with a very powerful set of tools for effectively reading and learning from a wide variety of texts.

When it comes to teaching comprehension strategies, two approaches have received widespread support—“direct explanation of strategies” and “transactional strategies instruction.” Direct explanation of strategies has been repeatedly validated and endorsed over the past two decades (e.g., Duffy et al., 1987; Duke & Pearson, 2002; NICHD, 2000; RAND Reading Study Group, 2002). Direct explanation of strategies is a very explicit, step-by-step approach. Usually, carefully preplanned lessons and carefully prepared materials specifically designed to facilitate students learning the strategy are used. A typical unit designed to initially teach a strategy could last several weeks. It begins with the teacher doing the bulk of the work—explaining the strategy, noting its importance, modeling its use, and the like. Then, gradually, the instruction progresses from a situation in which the teacher does most of the work to one in which students assume primary responsibility for use of the strategy. Duke and Pearson’s (2002) list of the basic components of direct explanation are shown below:

- An explicit description of the strategy and when and how it should be used
- Teacher and student modeling of the strategy in action
- Collaborative use of the strategy in action
- Guided practice using the strategy, with gradual release of responsibility
- Independent use of the strategy (pp. 208–210)

The use of direct explanation to teach students to make inferences is likely to proceed something like this: First, the teacher defines an inference, telling students that an inference is an educated guess and that they make an inference by combining their prior knowledge with information they gain from the text. Next, the teacher models making inferences. For example, he might read from the first page of Anderson’s (1999) *Speak*, noting the narrator’s observation that, as boys and girls who used to be her lab partners or gym buddies got on the bus, they glared at her, and note his inference that she had done something to annoy her friends. After modeling several such inferences, the teacher asks students to think aloud as they make some inferences from *Speak*. Over the next several days, the teacher and the students do a good deal of reading aloud from *Speak* and make inferences as they do so. Then, gradually, the
teacher fades out of the picture, prompting students to make inferences but letting them do the work of actually making them. He also encourages students to make inferences on their own outside of class.

Using direct explanation is a powerful, effective, and efficient way to initially teach a strategy. However, relying exclusively on direct explanation to teach a strategy may result in a problem. Used by itself, direct explanation may be too artificial and too separated from the ongoing activities of the classroom. Students may learn to use the strategy during the special periods set aside for strategy instruction but then fail to use it when they are reading in other subject areas and at home.

In response to this problem, Pressley and his colleagues developed transactional strategies instruction. It, too, has been described and researched in a number of studies (e.g., Brown, Pressley, Van Meter, & Schuder, 1996; Pressley et al., 1992; Reutzel, Fawson, & Smith, 2003) and found to be effective. Like direct explanation of strategies, transactional strategies instruction includes direct explanation as part of the initial instruction. However, as compared to direct explanation of strategies, transactional strategies instruction is much less structured, and the period of directly teaching the strategy is likely to be brief. Moreover, transactional strategies instruction is introduced as part of the ongoing reading activities in the classroom when the occasion arises for students to use a particular strategy.

What we recommend is a combination of direct explanation and transactional strategies instruction (Graves & Sales, 2007). Such instruction begins with a carefully prepared unit of direct explanation that might last two to three weeks. This focuses students’ attention and gives them a solid understanding of the strategy. Then, following the initial two to three weeks of direct explanation, the approach becomes more transactional and constructivist. During this phase, the instruction includes the following features:

- Students increasingly assume the role of active participants.
- There is considerable discussion and critical examination of the strategies.
- The instruction proceeds at a rate dictated by the students’ needs and progress.
- Students are fully informed about the purposes of the strategies they are working with.
- Developing students’ self-regulation skills is a central concern.

We believe that this combination of direct explanation of strategies and transactional strategies instruction ensures that students both learn the strategies thoroughly and independently use the strategies in their daily reading activities.

**Promoting higher-order thinking**

Promoting higher-order thinking is the fourth facet of the curriculum we are suggesting. Endorsements of higher-order thinking have always been prominent, and recommendations to engage students in higher-order thinking remain prominent in the current literature (for example, Taylor, Pressley, & Pearson, 2002). When teachers are working on this facet of comprehension instruction, we expect to see (1) instructional activities such as in-depth discussions as students are reading; (2) discussions that frequently lead to recognizing the author’s stance; (3) integrating the ideas in the text and elaborating on them; or (4) application activities that focus on creative and practical thinking related to the text’s topics. Most importantly, we would expect to see repeated questions that push children to think beyond the literal level and to justify their thinking by referencing both the text and information outside of the text.

In most classrooms we visit, we do see some attention to higher-order thinking. In many classrooms, however, the attention is less planful, less deliberate, and less frequent than it needs to be, and instructional activities, such as those described above, are rare events. Perhaps the biggest factor is the types of questions being asked. At minimum, creating powerful instruction to promote higher-order thinking requires a clear conception of the nature of higher-order thinking, knowledge about the various question types that prompt higher-order thinking, and understanding of what constitutes higher-order responses.
We have found two sources to be particularly helpful in doing so. The first is Resnick’s (1987) *Education and Learning to Think*. Although this short book was published more than 30 years ago, it continues to provide excellent information on the nature of higher-order thinking and ways of promoting it. Here are the major characteristics of higher-order thinking Resnick identifies:

- The path to a solution is not fully specified in advance.
- The total path is not “visible” (mentally speaking) from any single vantage point.
- Multiple solutions, each with costs and benefits, are possible.
- Multiple criteria are used in evaluating solutions.
- Not everything that bears on the task at hand is known.
- Identifying solutions requires self-regulation of the thinking process, demands substantial effort, and often requires finding meaning in apparent disorder.

An assignment for middle school that would promote this sort of thinking is typically of some length. For example, the principal of a large middle school in an aging building became concerned about energy consumption and challenged each of the eighth grade homeroom classes to design a plan to decrease energy waste in the school. The only guidelines for the assignment were that it should include both advantages and disadvantages of the plan, cite evidence whenever possible, be no longer than 10 pages, and be completed within three weeks. The assignment clearly demanded the type of higher-order thinking Resnick described: The path to the solution is not specified, multiple solutions are possible, multiple criteria will be used in evaluating the solutions, and the work demands substantial effort.

A second source we have found useful in considering higher-order thinking is Anderson and Krathwohl’s (2001) *A Taxonomy for Learning, Teaching, and Assessing*. Anderson and Krathwohl have provided an update of Bloom’s landmark *Taxonomy of Educational Objectives*, along with rich explanations of how to use the taxonomy and vignettes illustrating its practical applications. A much simplified and slightly modified version of Anderson and Krathwohl’s work includes seven types of thinking.

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**Remembering:** Retrieving relevant knowledge from long-term memory

For example, students in eighth grade history might use this type of thinking when asked to read the section in their textbook on the Battle of Gettysburg and then list the major events of the battle.

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**Understanding:** Constructing meaning from instructional messages, including oral, written, and graphic communications

Middle school students reading Lowry’s (1993) *The Giver* might use this type of thinking when discussing what Jonas is likely seeing at the very end of the story, as he pictures twinkling, colored lights inside a warm house.

**Applying:** Carrying out or using a procedure in a given situation

For example, a sixth grade science class might use this sort of thinking by reading the book *Field Trips: Bug Hunting, Animal Tracking, Bird-Watching, and Shore Walking* by Arnosky (2002) and then following Arnosky’s suggestions for recording observations of animals in nature while on a trip to the local forest preserve.

**Analyzing:** Breaking material into its constituent parts and determining how the parts relate to one another and to an overall structure or purpose

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*Silent reading in combination with other strategies can be used to promote reading comprehension.*

Photograph by Alan Geho
After reading several editorials in *Scope Magazine* on different ways to decrease global warming, seventh grade students might practice analytical thinking as they decide which of the approaches presented might be the best to implement universally and what arguments would support this choice.

**Evaluating:** Making judgments based on criteria and standards

For example, a middle school health teacher might spend a good deal of time teaching students how to use evaluative thinking as they use search engines to find relevant resources for their research project on careers.

**Creating:** Putting elements together to form a coherent or functional whole, reorganizing elements into a new pattern or structure

For example, in discussing the Orbis Pictus Award-winning book *Shipwreck at the Bottom of the World* (Armstrong, 1998), the teacher could encourage students to engage in creative thinking as they puzzle over what other strategies Shackleton might have used to try to save his crew.

**Being metacognitive:** Being aware of one’s own comprehension and being able and willing to repair comprehension breakdowns when they occur

At the end of reading the first act of *Romeo and Juliet*, eighth grade students might be asked to be metacognitive as they discuss what strategies they used to help them understand Shakespeare’s difficult verse and vocabulary.

Of course, Resnick and Anderson and Krathwohl are not the sole sources of information on higher-order thinking, and their approaches are not the only ones that can be used. What is important is that any approach that is taken be theoretically sound, well articulated, and a prominent part of the curriculum.

**Concluding remarks**

We believe that comprehension instruction is a vital part of the literacy curriculum and ought to receive a great deal of emphasis, particularly in the middle grades. We believe that comprehension instruction should be multifaceted and that each type of comprehension instruction deserves serious consideration and ample time in the classroom. Finally, we believe that the four-part comprehension curriculum we have described here is a reasonable starting point for a comprehensive comprehension curriculum—a curriculum that recognizes the importance of comprehension, gives attention to its various facets, and appropriately weights comprehension instruction as a very significant part of the overall literacy curriculum in the middle grades.

In concluding, we want to make some suggestions as to who should be responsible for each of the four parts of the program. First, we do not think that English teachers should be given sole responsibility for fostering comprehension. Comprehension is everyone’s business. Second, we do not believe that “every teacher is a teacher of reading.” Teachers are responsible for teaching their content, and, of course, for helping students understand their content, but that does not mean being a reading teacher.

Instead of either of these options, we see assigning responsibility this way: First, all teachers who use written texts in their classes (and this means virtually all teachers) are responsible for fostering learning from text, not so that they can be reading teachers but to help their students learn their subject. Second, English teachers have primary or even sole responsibility for fostering response to literature. Fostering response to literature is one of their principal concerns and something they almost certainly know more about than other teachers. Third, and rather unfortunately, English teachers should also have primary responsibility for teaching comprehension strategies. While English teachers are not the only ones who could do this, they are the only ones likely to do it. Other teachers should reinforce the strategies learned in English classes. Finally, all teachers have the responsibility of promoting higher-order thinking in their subject areas. To even things up a bit, teachers in areas other than English should probably shoulder more of the burden than English teachers. The bottom line is this: Fostering comprehension is everyone’s job, and bringing all students to the highest possible levels of comprehension will require the very best efforts from all teachers.

**References**


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Creating a Shared Definition of Good and Bad Writing Through Revision Strategies

Allison L. Baer

Day after day my students write. They write the usual school assignments: poetry, journals, essays, responses to questions, reflections, summaries. Then they write the important stuff: notes to friends, lists of names of friends, nasty messages to friends, questions to friends. Without even realizing it, they are prolific writers. They write on paper, notebook covers, arms, and hands. As their sixth grade language arts teacher, I was constantly telling my students to do their best writing. When assigning a rough draft I heard myself saying, “Even though this is a rough draft, do your best writing!” During the revision or editing part of the process, they were told to help their peers to improve their writing. Like most other writing teachers, I told my students to “write well” or to “show me their best writing.” While I knew what I meant by this, did they? Were we even talking the same language? Just how could we achieve this ever elusive goal of “good writing?”

In an effort to build some common language about “good writing” and to teach effective revision strategies, I involved my students in an action research project using the Worse/Better Writing Strategy developed by Andrews-Beck (1989). In her dissertation, Andrews-Beck described a worse/better writing strategy that she used as the basis of her research. This strategy was beneficial in creating a shared definition of good and bad writing as a revision strategy and provided a window into how these students revised their work. After a review of the literature on how revising is often taught, a description of using the worse/better writing strategy to create a shared definition of good writing will be presented. The article continues with a discussion of how this led our class to see the importance of revision. Some revision strategies we found to be effective are described.

How we teach revision

A handwritten sign over author Jane Yolen’s desk reads “Value the process, not the product” (Yolen, 2003, p. 169). Revision is a huge part of this process. First and foremost, students must understand that writing is a recursive process (Brockman, 1999; Dyson & Freeman, 2003; Fletcher, 1993; Lester & Lester, 1994). While some may see it as a linear, bottom-up process (learning letters, then words, sentences, paragraphs, and so forth), more effective writing instruction stresses the top-down model in which writing is seen as a process, and the writer is seen as an author who may need help with writing conventions (Del Principe, 2004). Revising is part of that process, as an author reflects on what she or he has written and then tries to make it better. Revision is not done just one time; rather, the author revises until...
his or her piece of writing meets some pre-determined goal (De La Paz & Graham, 2002). Revision involves authors returning to their thoughts, evaluating them, and seeking to clarify their meaning (McCutchen, Francis, & Kerr, 1997). In addition, Graves (1994) stated that revision is partly developmental, as “it depends on the child’s ability to read the outside world and express her perceptions and understanding in her writing” (p. 226). Because the reading strategies that writers bring to their revisions influence the types of revisions they make, reading is also part of the revision process (McCutchen, Francis, & Kerr, 1997). Using the reading cueing systems (grapho-phononemic, syntax, semantics) when revising aids the author in knowing if a text looks correct and makes sense (Barnitz, 1998).

Revision is also a cognitive process of applying specific writing strategies (Lin, 2001). It is up to educators to provide instruction in specific revision strategies. The self-regulated strategy development model (De La Paz & Graham, 2002) includes the explicit teaching of “writing strategies along with procedures for regulating these strategies and the writing process” (p. 688). De La Paz and Graham (2002) found that students who used this model spent more time revising with intent, thus improving the quality and quantity of their writing. Brockman (1999), working with a high school senior’s college application essay, found that changing the topic was yet another way to revise. As Brockman’s student worked through his essay, he realized that it required a major revision of the topic to suit his audience—the college to which he was applying. Harper (1997) encouraged educators to teach specific revision strategies rather than make vague comments on students’ writing, such as “add detail” or “be more specific.” She described how she taught her middle school students to ask questions of the author, use mental snapshots of scenes to add detail, use “thoughtshots” to describe a character’s thoughts, “explode a moment” to bring life to descriptive writing, and “make a scene” to help students determine if their writing is balanced.

Knowing that writing is a recursive process that involves the difficult practice of revision (which involves multiple strategies), just how can a teacher get students to revise their writing? According to my students, one quick draft and they were finished! Enter the worse/better strategy.

**Worse/Better strategy to improve student writing**

At the time of this action research project, I was teaching sixth grade at East Middle School in Warren, Ohio—a small, Midwest urban center with fewer than 50,000 people. East MS served approximately 650 students in grades five through eight. Of the total population, 33% were minority, mostly African American, and approximately 56% of the student population received free or reduced-price lunches. My students wrote in a variety of genres on a daily basis including journals, poetry, lists, notes (clandestine mostly), letters, autobiographies, narratives, and creative stories. They all had journals, writing folders, and writing notebooks. In general, they worked well together in peer editing and sharing ideas. Forty-nine students in two language arts classes experienced the worse/better strategy.

In the following description, we see how the worse/better strategy was implemented, followed by a closer look at what four students *said* they did and what they *actually* did to revise their writing. We zero in on two students whose revisions were not at all what they claimed. This section ends with a list of Guidelines for Good Writing that students developed, which was used to improve their writing for the remainder of their sixth grade year.

**How the worse/better strategy works**

Having adapted Andrews-Beck’s (1989) worse/better strategy for my sixth grade language arts students, I gave students a Peanuts® comic strip with the words blanked out, and we talked about the characteristics of comic strips. This discussion included the pictures, frames, thought and speech bubbles, and story line. Both classes were given the same comic strip and were directed to do their best to create a story line for the characters in the comic strip. They were told they could give the characters different names, but their stories should be original and did not necessarily have to be funny. This comic was labeled “number one.” After completing their stories, the students were given another copy of the same comic strip and were directed to do their best to create a story line for the characters in the comic strip. They were told they could give the characters different names, but their stories should be original and did not necessarily have to be funny. This comic was labeled “number two.” After completing their stories, the students were given another copy of the same comic strip and were directed to label it “number two.” They were then told to make number two worse than number one. This created some confusion. Students wanted to know what was meant by *worse*; they were told that worse was whatever they thought it to be, and they could change...
anything they wanted to. Once they had completed number two, they were then asked to turn that paper over and answer the question, “What makes writing bad?” Once again, they wanted to know what I meant by that question and were told to express their thoughts; there were no wrong answers. They were then asked to underline all the changes they had made to make their writing worse. Pages one and two were stapled together, with page one on top, and they were collected for the day.

The following day, pages one and two were given back to the students along with another copy of the same comic strip to be labeled “number three.” The students were directed to look at their number one strip and rewrite it, making it even better. They were once again told they could change anything. Repeating the experience with number two, they wanted a definition of *better*. They were told that whatever they thought was *better* was good enough. After completing their writing, they were told to turn number three over and answer the question, “What makes writing good?” The usual confusion came over the class, and they were told that their definition of good was all that mattered. The only way they could be wrong was not to answer the question at all. Number three was stapled to the back of one and two before the papers were collected. As with number two, students were asked to underline all the changes they had made to improve their writing.

After collecting the papers, I randomly chose four students’ papers to learn how they defined good and bad writing and if their definitions matched what they actually did. In this way, I expected to discover if we had a shared definition of “good writing.” Their answers to the question, “What makes writing bad?” are contained in Figure 1.

For the most part, these students had a shared definition of what makes writing bad in that most of them said bad writing is sloppy. They tended to focus on the mechanics of writing by discussing spelling, punctuation, handwriting, and spacing. Only one student, Ciera, spoke to the content, but her actual writing reflected only a change in mechanics—her spelling being much worse and her handwriting being sloppier (See Figure 2 for actual student writing). Interestingly, Rocco defined bad writing as being solely mechanics, when, in reality, he changed the content of his writing by changing the storyline to make the characters act mean towards each other (See Figure 2). Figure 3 explains how the students answered the question, “What makes writing good?”

<table>
<thead>
<tr>
<th>Name</th>
<th>What He/She Said</th>
<th>What He/She Did</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rocco</td>
<td>Punctuation out of place, the subject, the title, spelling</td>
<td>Changed storyline, characters “yelled” at each other, spelling worse to the point where it is almost unintelligible</td>
</tr>
<tr>
<td>Ciera</td>
<td>Sloppy handwriting, misspelled words, hard to understand or no understanding at all</td>
<td>Bad handwriting, misspelled words</td>
</tr>
<tr>
<td>Joseph</td>
<td>Sloppy work, incorrect spelling</td>
<td>Made spelling worse to the point where it is almost unintelligible</td>
</tr>
<tr>
<td>Rashad</td>
<td>Sloppy, no spaces in between words, no exclamation points, misspelled words</td>
<td>Misspelled words, words all over the place, sloppy spelling</td>
</tr>
</tbody>
</table>

Again, most of these students had a shared definition of what makes writing good—neatness. As before, they also focused on mechanics, except for Ciera and Joseph. While Ciera did have some incomplete sentences in her revision, she did change the actual content in that she changed the way the characters said things (See Figure 2). Joseph revised by adding more specific details in his writing and revising his language. To get an even better understanding of how these students defined bad and good writing, the writing of two students was chosen for analysis. This was done to accomplish a more in-depth study of how they actually translated their definitions to their writing. Figures 4 and 5 present what Ben and Jenny characterized as bad and good writing and how that translated to their writing. Each one represented different types of students; Ben was a middle-class African American boy, Jenny was a middle-class white girl, and they both worked hard at whatever they did. I knew they would both take this assignment seriously and give honest answers.

Ben’s definition of bad writing better matched his practice than did Jenny’s. Ben talked about bad writing being sloppy and not funny, and in practice he made his spelling worse and had the characters say mean things to each other. He did the same with his definition and practice of good writing. See Figure 6 for Ben’s and Jenny’s actual writing. On the other hand, Jenny’s definition of bad writing dealt more with content than mechanics, but in practice she wrote very sloppily, spelled a few words wrong, and had incorrect capitalization. Essentially, she did the same thing with her definition and practice of good writing in that her story line...
changed very little, but she used very neat and fancy handwriting and cleaned up most of her spelling errors.

**Characteristics of good and bad writing**

After finishing this exercise, the students used their own definitions to come up with a list of characteristics of bad and good writing. They decided that bad writing was sloppy, complicated, had no paragraphs, no sentences, incorrect spelling, was not understandable, had unfinished sentences, no punctuation, no excitement or passion, was ordinary, was not interesting or fun, and dragged on with unnecessary information. Good writing, on the other hand, was neat; had a clear beginning, middle, and end; made sense; did not have too many people in it; had punctuation and correct spelling; was filled with excitement, laughter, passion, and fun; was neat to read and was interesting; had correct capitalization; and contained a tinge of spice and happiness.

We then took our class-created definitions of bad and good writing and discussed which characteristics had to do with the content and which had to do with the...
mechanics of writing. After some discussion, students decided that the content was the hardest part to “get good,” because the author was the one in control of the content. We all agreed that the mechanics could be helped through peer editing, which we were all used to doing. In a discussion on revision, it was pointed out that a peer might make suggestions to improve the writing or point out confusing parts, but the content was really controlled by the author. It was this revelation that set my class on the road to revision. Throughout the ensuing months, in our daily writing, we spent many days revising our content and much less time on editing, because that seemed to come easier through the revision process.

The next step came with the students creating their own Guidelines for Good Writing. As a class, we took all of the definitions they had come up with and their new understanding of the importance of content over mechanics and produced guidelines, which we used for the remainder of the school year. We collectively created various writing rubrics using these guidelines, depending on what type of writing they were doing (See Figure 7).

The improvement in their writing amazed me. As the school year progressed, their writing made more sense and was more interesting to read since they took more time and ownership in the revision process. The students now had a shared working definition of bad and good writing, with a shared understanding of the importance of the revision process. The Guidelines for Good Writing were word processed, copied, and kept in all of their writing notebooks so that they had it handy as they wrote. They had written it themselves, and they had taken control of and responsibility for their own writing. They no longer constantly asked me, “Is this OK, Mrs. Baer? Is it good?” because they had constructed their own understanding of what good writing really is.

Helpful revision strategies
Yet another outcome from our investigation into bad and good writing was the realization that we needed to spend much more time on the revision part of the writing process. They spent lots of time on the pre-writing, drafting, editing, and publishing part but, somehow, had skipped the important step of revision. Based on the statement in their guidelines that read, “The better the content, the better the writing,” we decided that we would spend much more class time on the revising part of the writing process. Following are some of the most effective revision strategies we used.
We enhanced our literate environment. Following Cambourne’s (1995) conditions of learning, students were immersed in writing through multiple literacy experiences. I demonstrated what good writers do by using a diverse selection of quality literature. Students were engaged in writing with a purpose, and I had high expectations of them as authors and made them responsible for improving their own writing by holding them accountable to their Guidelines for Good Writing. While they struggled to find their voices, I accepted approximations of good writing. They had opportunities to employ their writing skills on a daily basis, and we all responded to each other’s writing verbally and in writing. This kind of environment provided them with many opportunities to hone their writing skills.

We wrote our rough drafts on every other line of the paper. This may sound like a simple thing to do, but these sixth graders had a difficult time understanding why they were asked to do this. Many of them said they remembered writing like this in first or second grade, and they thought it was a bit “babyish” to do this in sixth grade. I explained that the blank lines were going to be used for revision. They needed space to make changes, and if they wrote on every line, they would have no room on the page for revisions. Ideally, they would have word processed their rough drafts, but few of them had the skill to type quickly enough to catch their thoughts.

We spent more time revising than we did proofreading our work. If we truly value the revision process then we need to take multiple class periods to work on this. On average, we spent about three to five class periods revising a single piece of writing. We used to spend that much time proofreading, and now we spend about one class period specifically on that; much of the proofreading process had become incorporated into the revision process. Allowing a large amount of class time for revision showed my students that we valued and supported what they had decided in their writing guidelines.

We wrote all of our revisions in green ink. It did not really matter what color they used provided it was different from the original color. Since my grading and revising was done in green ink, we had a large stock of green pens, which the students enjoyed using for their revising. This color then stood for “things that will make your writing better.”

We read our papers aloud to each other. After completing their rough drafts, students wrote their names on the board. When there were at least three people finished, they would meet in a group so that each could take a turn reading his or her paper aloud. Students tend to pay attention to the punctuation and other typographical cues when they read aloud (Opitz & Rasinski, 1998). The authors were forced to look at every single mark they
had put on the page, while the listeners focused on the overall content to see if it made sense. Listeners were encouraged to write questions they had about the piece of writing. Each student then responded to the author by asking questions and commenting on the "wholeness" of the piece. By writing down their questions, they were ready to discuss each piece of writing (Harper, 1997).

When other students completed their drafts, they joined groups in progress. It worked best if the groups were no larger than four or five students. Each student had to listen and respond to at least one other piece of writing before making the suggested revisions written on the blank lines. They were free to rejoin a group to discuss or reread something they had revised. I made a point of visiting each group to provide input.

We learned to respect the ideas of the author. Since they had decided that the author controlled the content while anyone could do the editing, we made it clear that, in terms of content, the author’s decisions ruled. If it was a question of making sense or of something missing, we expected authors to listen to their peers to make their content better. On the other hand, if an author really wanted the protagonist to have two purple, blood oozing heads, and it made sense to the story but sounded weird to her or his peers, well then, two purple heads it was.

**Conclusion**

How did the students decide that bad writing had bad spelling, no paragraphs, no sentences, and was sloppy? Where did they get the idea that good writing used capitalization, sentences, punctuation, and was neat? I think back to my own teaching, and know I have emphasized the mechanics of writing so much that I wonder if I, and many other teachers like me, have not instilled in them this definition. Many of my students, when asked what bad writing was, immediately said it was sloppy. In their minds they were translating “writing” into “handwriting,” a simple mistake to make. Are those who are teaching children to write spending too much time on the mechanics and not enough time on the content? By following the Writing Process (Lester & Lester, 1994) (e.g., pre-writing, rough draft, revision, editing, final draft), are we spending too much time on the editing part and not enough time on the revision part? Revision is much more difficult to work with. It is much easier to correct surface errors and ignore the parts that do not make sense. Teachers of writing need to encourage their students to revise their content to make the writing interesting with a tinge of spice.

This process gave me a picture of what went on in the minds of my sixth grade writers. In the words of Yolen (2003), we tried to “grab hold of the experience (of writing) with both hands and take joy” (p. 20). If you stop and think about it, this really does make sense. Sometimes we need to stop and consider what we are asking our students to do. It might make perfect sense to us but does it to them? Do they share our definition? By doing this in their classrooms, teachers will enable their students to show their work. Let them show you what they know. Discover your own list of characteristics of good and bad writing. Allow them to take ownership of what and how they write.

Middle school students are writers; they write all the time. By reflecting on their writing, students were able to verbalize their own thoughts and definitions about what a writer does and who they were as writers. They also learned that writing involves the often time-consuming process of revision. This whole experience helped them on their way to becoming even better writers, able to write not only better poetry, journals, essays, and summaries but much more meaningful, well-written notes.
References

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Letter from the President
Theresa W. Hinkle

“Never doubt that a group of thoughtful, committed citizens can change the world. Indeed, it’s the only thing that ever has.”

While noted anthropologist Margaret Mead wasn’t referring to middle level educators, her words should certainly provide inspiration as together we face today’s challenges and opportunities. Early last spring, the National Middle School Association helped organize a coalition of educational organizations to support a common legislative agenda to improve middle level education. But the coalition cannot do this alone.

You might be asking yourself, “What possible difference can one person make?” I could recount stories of famous people like Mohandas Gandhi or Mother Teresa, who often stood alone but always stood for their beliefs. Instead, I’d like to tell you about Toy Wong, a teacher from El Paso, Texas, and a former NMSA Board member. In 2003 the NMSA Board of Trustees held our spring meeting in Washington, D.C., so that we could visit Capitol Hill and speak with members of our respective legislative delegations. Toy was unable to get an appointment with her representative that day, so instead she looked for someone on the Education Committee with whom to speak. Spotting the name of a freshman representative from the nearby state of Arizona, she made an appointment to see him. Arriving at the office of Rep. Raul Grijalva, Toy was somewhat surprised but pleased to learn that the representative himself would be meeting with her. Rep. Grijalva was very interested in what Toy had to say, and the two communicated periodically during the following years. Who knows if this meeting was the impetus, but several years later, it was Rep. Grijalva who sponsored the Success in the Middle Act (HR 3406) that is now before Congress. Those of us who know Toy Wong’s passion for middle grades education can’t help but believe in the power of one, which she demonstrated that day.

If passed, Grijalva’s Success in the Middle Act (HB 3406) and its Senate counterpart (SB 2227) sponsored by Senator Barack Obama will authorize grants to states and districts to help improve middle grades education and turn around low-performing middle schools. State plans will include the development of early identification and intervention programs designed to help those students who may not be prepared for success in high school and beyond. Many other important areas such as professional development, student support programs, and research will also be funded by this act. You can go to the NMSA Web site (www.nmsa.org) for additional information on this important legislation.

So, what influence can a single middle level educator have? Just as Toy did, you can speak out for what is best for young adolescents. Contact your senators and representatives; call them, write them, visit them. Be persistent and passionate in telling them your stories and letting them know how important this legislation would be to you and your students. But do not stop there. Passage of this act won’t be the end; it will be the beginning. We must then embrace the opportunities this legislation will provide. We must collaborate with our colleagues to become that committed group that can “change the world.” Only then will success in the middle be a reality for all students and not just the name of a piece of legislation.

Theresa W. Hinkle

NMSA Elections

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Month of the Young Adolescent, October 2008

Initiated by National Middle School Association (NMSA) and endorsed by more than 40 other national organizations focused on youth, Month of the Young Adolescent is designed to bring attention to the important needs of young adolescents. NMSA hopes to provide parents and other adults with information on how they can support the educational, physical, and social development of young adolescents. Working together, we can highlight the need for strong educational partnerships among schools, parents, students, and community members so that every 10- to 15-year-old will have the opportunity to become all he or she can and should become.

Goals of this initiative include:
- Raising awareness among parents and community members about the needs of this age group and helping them respond to those needs appropriately
- Promoting healthy bodies and healthy minds
- Increasing mutually supported activities between schools and communities
- Encouraging communities to provide opportunities for young adolescents to pursue their dreams and aspirations

Start planning your Month of the Young Adolescent celebration today! For ideas and examples of what other schools and districts have done, visit www.nmsa.org/moya

A key part of the Month of the Young Adolescent initiative is giving young adolescents a voice and an audience. Encourage your students to participate in the Month of the Young Adolescent Expressions from the Middle artwork contest. This is an opportunity for students to creatively express how they contribute to our global society and to receive international recognition. Winners are featured in the online publication Expressions from the Middle and receive certificates of recognition and a cash award. For more details about this year’s contest and to view past winners, visit www.nmsa.org/moya

Attention art teachers!
Artwork submissions for the 2007–2008 Expressions from the Middle contest are due March 28, 2008.

For contest details and entry forms, go to www.nmsa.org/moya

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The School and Family Connection
We talked with Judith Baenen about building relationships with parents and families, preservice course work, supporting new teachers, and maintaining a sense of humor.

On Being a New Teacher
We talked with Nick Toombs, a second year teacher in Denver, CO, about the preparation necessary for the first interview, his experiences as a new teacher, and the difference between his first and second years of teaching.

Book Study for Staff Development
We talked with Gail Heinemeyer, a former middle school principal, about the advantages of staff participation in a book study on This We Believe: Successful Schools for Young Adolescents. Gail also offers advice to leverage data for student achievement.

Expressions from the Middle
You can listen to podcasts submitted by students for the 2007–2008 edition of Expressions from the Middle. Expressions from the Middle is an online feature of Month of the Young Adolescent that celebrates young adolescents by showcasing student creative projects from around the world.

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This article reflects the following This We Believe characteristics: An inviting, supportive, and safe environment — Curriculum that is relevant, challenging, integrative, and exploratory — School-wide efforts and policies that foster health, wellness, and safety.
the likelihood of cardiovascular disease. Those risk factors include overweight and obesity, tobacco use including exposure to secondhand smoke, physical inactivity, hypertension, and levels of HDL-cholesterol (high density lipoprotein cholesterol) and LDL-C (low density lipoprotein cholesterol). As you might expect, a clustering of multiple factors places an individual at substantially higher risk (Hayman, et al., 2007).

Data show an upward trend among young adolescents in several of these risk factors. Although tobacco use does appear to be declining, statistics on the number of children and youth identified as overweight or obese indicate a marked increase nationally and globally, posing major public health challenges (Centers for Disease Control and Prevention, 2004; Hayman, et al., 2007; Strauss & Pollock, 2001). The Centers for Disease Control and Prevention (2004) sounded alarm bells regarding the rise in the incidence of overweight and obesity among children and adolescents in a status report, arguing that research shows “overweight and obesity are associated with increased risk for heart disease, diabetes, high blood pressure and stroke, high blood cholesterol, certain types of cancer, arthritis, and breathing problems” (p. 1).

Type 2 diabetes, which used to be called adult-onset diabetes, is on the rise among children, including young adolescents, across the globe including North America, Europe, and the Asia-Pacific region (Pinhas-Hamil & Zeitler, 2005). The rise in the incidence of Type 2 diabetes parallels the increase in overweight and obesity among children and youth (Hayman, et al., 2007).

In a gripping series of articles on Type 2 diabetes in January 2006, The New York Times reported,

There has been little research into the long-term impact of Type 2 diabetes on children. But doctors have a rough idea. The harsh consequences that can accompany diabetes tend to arrive 10 to 15 years after onset. If people contract diabetes when they are 15, 10, or even 5, they may well start developing complications, not on the cusp of retirement but in the prime of their lives. There is a big difference between losing a limb at 21 and at 70. There is a big difference between going on dialysis at 30 and at 65. (Kleinfeld, 2006)

Physicians note that Type 2 diabetes in young adolescents can create a perfect storm of health risks combined with a reluctance to make healthier choices. As one doctor put it, A lot of them are in denial. They have blood sugars of 300, 400, and they tell me right to my face they don’t have diabetes. “You’re wrong,” they say. “I don’t feel anything.” I tell them what can happen down the road, and they shrug. A 15-year-old doesn’t care what’s going to happen at 35 or 45. A 15-year-old is immortal. (Kleinfeld, 2006)

Since 1991, Dr. Jay Giedd at the National Institutes of Mental Health has been conducting research on how the human brain develops through adolescence and early adulthood, examining the factors that can contribute to a perfect storm of risky behavior and a seeming incapacity to consider the potential costs of the risks. For each participant in the study, he creates a photo album of sorts that includes MRI snapshots taken every two years to record, in great detail, how the brain changes and grows (National Institute of Mental Health, 2004).

With colleagues at Harvard, UCLA, and a dozen other institutions, Giedd is challenging many long-standing assumptions about the brain during adolescence. For example, most scientists have believed that the brain was largely a finished product by the time a child had reached the age of 12—a belief that is reflected in the work of Jean Piaget, who saw cognitive development culminating with formal operations around the time of puberty. In fact, Giedd’s brain imaging research shows that the brain continues to morph and develop at least until the early 20s and perhaps beyond that (Gogtay, et al., 2004).

Those changes, likely, are related both to genetics and to the “use it or lose it” principle, what Nobel Prize-winning neuroscientist Gerald Edelman described as “neural Darwinism”—survival of the fittest, or most often used synapses. Synapses are the connections between neurons, the pathways for nerve signals. Up until around age 12, “the neurons grow bushier, each making dozens of connections to other neurons and creating new pathways for nerve signals” (Wallis, p. 59). After a period of rapid expansion, though, the pruning begins. Those connections that are put to use appear to survive and thrive, sending signals between neurons faster and more efficiently. It appears that how young adolescents spend their time may be critical (National Institute of Mental Health, 2005). Research shows, for example, that practicing piano thickens the neurons in the brain regions that control the fingers (Mahr, 2007).

Though scientists have a long way to go in figuring out how far this principle can be pushed to explain
proficiencies or the lack thereof, Giedd is hoping his studies of twins will help. He explained, “We’re looking at what they eat, how they spend their time—is it video games or sports? Now the fun begins” (Wallis, 2007, p. 59).

And what does brain development have to do with risky behaviors and young adolescents’ faith in their own immortality? As it turns out, recent research reveals that the human brain appears to develop in a wave from back to front. The very last part of the brain to develop into its adult status is the prefrontal cortex, which controls planning, scheduling, organizing thoughts, setting priorities, suppressing impulses, and, yes, weighing the consequences of one’s actions (Eshel, Nelson, Blair, Pine, & Ernst, 2007).

Our understanding of adolescent behavior is complicated by the influx of hormones associated with puberty, which can create a “tinderbox of emotions” in the brain’s emotional center and a desire to seek thrills and sensations. Dr. Laurence Steinberg, a psychologist at Temple University, described it as a “time gap between when things impel kids toward taking risks in early adolescence and when things that allow people to think before they act come online. It’s like turning on the engine of a car without a skilled driver at the wheel” (Wallis, 2007, p. 61).

Recent studies document young adolescents’ use of poor-quality nutritional fuel for their journey through the early teen years. As body mass index readings among school-age students increase (Sorof and Daniels, 2002), the nutrition level of young adolescents’ diets appears to be decreasing, with a significant decline in the consumption of nutrition-rich foods like high-fiber fruits and vegetables and dairy products. That decline in nutrition value is accompanied by a marked increase in the intake of nutrient-poor foods and beverages, including a larger percentage of calories consumed in high sugar and high sodium content snacks (Cavadini, Siega-Riz, & Popkin, 2002; Eaton, et al., 2005; Nielsen, Siega-Riz, & Popkin, 2002; U.S. Department of Agriculture, 2005; Wright, Wang, Kennedy-Stevenson, & Ervin, 2003). In research analyzing changes in children and youth’s dietary habits over the last 25 years, researchers found marked changes in eating choices:

Overall increases were noted in the mean intake of non-citrus fruit juices, carbonated beverages, savory snack foods, pizza, and candy. Decreases were found in the intake of whole milk and most vegetables. In nearly all cases, changes in intakes resulted both from changes in portion size as well as changes in the percentage of the population consuming the food. It is concluded that the types and amounts of foods children consume have changed considerably over the last twenty-five years. (Sebastian, Cleveland, Goldman, & Moshfegh, 2005, ¶6)

As part of a service-learning project focused on healthy eating, a middle grades teacher and his students recently collected and documented the discarded wrappers from the snacks that students brought to school on a typical day. Not surprisingly, the evidence showed a surfeit of such popular snack choices as mini chocolate chip cookies, chocolate candy, sour fruit roll-ups, and chips of various sorts (Tim Keag, personal communication, December 12, 2007).

At least some of those snack choices likely reflect the influence of the pervasive advertising to which children are exposed. In a 2004 report, The Role of Media in Childhood Obesity, the Kaiser Family Foundation analyzed more than 40 recent studies of the connections between the media and obesity and overweight. For example, Kunkel (2001) found that the typical child sees more than 40,000 advertisements on television each year. The majority of those advertisements focus on food, most of it nutrient poor.

In their report, Pesterling Parents: How Food Companies Market Obesity to Children, the Center for Science in the Public Interest (2003) describes the pervasive and, they argue, pernicious connection between popular characters and food advertising. “Tie-ins with television, movie, and sports figures used to be limited to cereal boxes. Now they are on everything from crackers, beverages, ice cream, and cookies to pastries, fruit snacks, french fries, and frozen dinners” (p. 12).

Advertisements strongly influence preferences and spending—not just children spending their own funds but family spending as well. In 2003, marketing executives predicted that children under the age of 12 would spend $35 billion of their own money and influence family spending to the tune of more than $200 billion in that year alone—numbers that can only have increased with the pace of inflation (Kane, 2003). With prominent, effective advertising guiding their choices, children and youth’s preferences for admittedly unhealthy choices can mean big bucks for companies and big problems for the young people consuming the
nutrient-poor food that dominates what is marketed to them (Gallo, 1999).

As the National PTA pointed out in a recent report, poor nutrition does not just affect children who are overweight or obese.

Poor nutrition, even in non-overweight children, can affect brain development and performance in school (California Project LEAN, 2007). Children without proper nutrition may have a shorter attention span, more irritability, and more suspensions. In addition, a 2004 study showed that overweight kids are more likely to be bullies or victims of bullying than children of normal weight (Janssen, Craig, Boyce, & Pickett). (National PTA, 2007, ¶8)

Families, schools, and healthier lifestyles

The Learning Channel show Honey, We’re Killing the Kids provides a look at the causes of America’s childhood obesity epidemic and issues a critical wake-up call for parents. Nutrition expert Dr. Lisa Hark shows how everyday decisions can have long-term impacts on the health of our children. She uses measurements and statistics on the consequences of diet and behavioral choices to develop computer images that show parents what their children will look like as they age. The pictures morph gradually, as the parents see their children at age 20, 30, and then, finally, at 40. Dr. Hark then works with the families over the course of three weeks to introduce a set of life-altering rules that will, if followed, make those images of the future a lot less frightening.

In viewing one show broadcast early in the series, Jennifer Hill, a cardiac nurse at Duke University Medical Center, watched as the images of the children’s future selves morphed into what they would look like as adults if they continued their current patterns of nutrition and inactivity. As one young adolescent’s likely appearance at the age of 40 flashed on screen, Hill commented, “That’s what my patients look like. Sallow skin, dark circles under the eyes, often overweight, and plagued with various health complications, with heart disease only one of the things on a long list” (personal communication, June 18, 2006).

A description of one scene from a show broadcast early in the series will provide a taste, so to speak, of how patterns of unhealthy behaviors become routine, accepted, in fact, almost invisible. The nutritionist told a family that their respective individual habit of consuming two liters of soda each per day was bad for them. Holding up a clear measuring cup, she showed them what the average daily sugar intake should be for their 12-year-old: 10 teaspoons. Then she showed them the amount of sugar contained in that two liters of Coke their 12-year-old was downing every day—about three cups of sugar.

Even in its title, Honey, We’re Killing the Kids highlights the role of parents and families in changing patterns and habits around not just nutrition but lifestyle choices, in general. The recommendations made to families on the show are not limited to food alone. Families are encouraged to get out, get active, and get together, spending more time both inside and outside of the home engaging in cultural and physical activities that engage the entire family in doing something fun.

Another recent reality show focused on young adolescents, but this one broadened the scope to include both families and middle grades schools. For those of you who missed the show’s run on ABC in the summer of 2007, Shaq’s Big Challenge featured NBA basketball player Shaquille O’Neal and six overweight or obese young adolescents from two middle schools in Broward County, Florida. Over the course of nine months, O’Neal and several experts in nutrition, fitness, and coaching worked

Healthy school lunches must be part of any comprehensive wellness program in middle schools.

photo by Alan Geho
Young adolescents need health- and wellness-oriented physical education programs to realize the Greek ideal: “A sound mind in a sound body.”

photo by Alan Geho

with the middle grades students to help them lose weight and adopt healthier lifestyles.

In the process, O’Neal and his colleagues tried to help improve the health quotient in the students’ families and in their schools. For example, a nutritionist examined food diaries from family members and met with each family to talk about shopping and cooking to meet the nutritional needs of the family. A personal trainer pushed the kids to exercise and pushed the parents to allow the kids to experience some disappointment and even a little pain along the way.

At one middle school, O’Neal’s personal chef tried to help the district food services manager and the cafeteria staff figure out how to develop nutritional and tasty school lunches while staying within the school district’s $1-per-meal budget. That effort demonstrated both the creativity and the efficiencies required to feed more than a thousand students something that would be good for them and that they would eat, with little or no wasted food, in a span of two hours.

O’Neal and the personal trainer started a voluntary after-school exercise program for the six young adolescents involved in the show. When those kids were given permission to invite friends to participate, the group grew gradually from six kids to more than 50, all of whom appeared to be overweight or obese. As a few of those students commented in conversation with O’Neal, they felt more comfortable exercising with other students of similar size than they did in regular physical education classes. The association between bullying behaviors and overweight and obesity, well documented in research (e.g., Janssen, et al., 2004), seemed apparent in their reluctance to push themselves physically in front of more slender classmates. O’Neal also advocated strongly for daily exercise for all the students in one of the middle schools and confronted both the tight time clock of a school day when every minute counts and the initial reluctance of faculty to lead the students in exercises. With the decline in the availability of both physical education and recess, perhaps in relation to the march toward testing, most middle grades students are not experiencing daily opportunities to engage in any kind of exercise during school hours (Villaire, 2007).

O’Neal and his team of experts applied their combined knowledge, persuasiveness, and charisma to the task of persuading the young adolescents and their families that lifestyle changes were both possible and feasible, and, perhaps most importantly, essential to the students’ physical, mental, and social health. All of the young adolescents lost weight and improved their fitness as measured by the President’s Physical Fitness Test. Their respective families learned a great deal about nutrition in the context of family culture. Despite some early reluctance, the families of all six participants proved willing to change their own dietary habits and create opportunities for physical activity.

What was most striking, though, were the apparent changes in the students’ respective senses of self-efficacy, not just in relation to controlling their own physical health but also their control over their destinies, more generally. A male eighth grader who participated seemed to emerge from his cocoon like the most amazing of butterflies, shedding his hesitancies about interacting with the world as he shed pounds. A female eighth grader and her mother, who seemed to share a fear of failure heightened by initial setbacks, eventually found power in gradual success. In addressing their physical health, these two young adolescents also began to address the social and psychological consequences of poor health.

That notion of gradual success in moving toward a healthy lifestyle stands in contrast to other efforts to change society’s bad habits. In comparison to public relations campaigns aimed at reducing tobacco use or littering, Michael Berman argued that fighting obesity
and sedentary lifestyles poses new challenges. “This is different from second-hand smoke where you can have a program of abstinence. You can give up smoking. You can’t give up eating” (Tumulty, 2006, p. 42).

So what can middle grades schools do to provide healthier learning environments for all students? Former President Clinton argued that schools and beverage manufacturers should not be collaborating to make those poor nutritional choices routine. In a deal he negotiated on behalf of the William J. Clinton Foundation, the nation’s largest beverage distributors have agreed to halt nearly all soda sales to public schools by 2009. Former President Clinton said of the agreement, “This is a bold step forward in the struggle to help 35 million young people lead healthier lives” (CBS News, 2006).

In a recent article in *The News and Observer* (Weigl, 2007), the reporter noted that the bottom line for schools and their funding can compete with what is best for students’ waistlines. With marketing to youth featuring nutrient-poor foods produced by companies eager to offer their products in cafeterias and vending machines, cash-strapped schools may face a difficult choice: long-term physical health or short-term economic health? Some schools are seeking a middle ground, implementing what Weigl calls “stealth health” by providing healthier versions of brand-name foods (e.g., pizza from Pizza Hut made with whole grain dough and reduced fat) and eliminating whole milk and 2% fat milk from dairy cases.

In legislation passed in 2004, Congress ruled that all schools that accept federal subsidies for meals were expected to establish and implement health and wellness policies by the start of the 2006–2007 school year (Center for Science in the Public Interest, 2007). Those policies must address both improving nutrition and increasing physical activity. It is too early to tell if the policies are having an impact on waistlines and lifestyles, but the mandate has educators, parents, and community members discussing health and wellness in school districts across the country.

As public attention to the contents of vending machines and cafeteria a la carte lines continues to intensify, Congress has expressed an interest in banning the sale of all unhealthy foods in the nation’s schools (Severson, 2007). Though the deal with beverage manufacturers negotiated in 2006 made huge strides in limiting access to soda and sugary fruit drinks, this proposal would broaden to include sugary, salty, and high-fat processed foods of all kinds.

Beyond the cafeteria and Congressional mandates, schools may directly and indirectly support nutritional choices through fund-raising efforts. In *Sweet Deals: School Fundraising Can Be Healthy and Profitable*, the Center for Science in the Public Interest (2007) offers many ideas for raising much needed funds without accumulating the unwanted calories associated with many popular fund-raisers like candy and bake sales (2007).

Ironically, in the U.S. many of those who live in poverty also are overweight or obese (Drewnowski & Specter, 2004). Fast food is accessible and cheap, two factors that make it appealing to those with few resources to put toward the cost of healthy eating. In their study of the possible links between obesity and circumstances in public housing communities, Regan and her colleagues (2006) noted a critical combination of limited access to physical activity resources and limited access to grocery stores in communities dominated by convenience stores and fast food.

In Georgia, nutritionists work through the cooperative extension system to educate Georgia residents about the possibilities for healthy eating on a budget. Gail Hanula, a nutritionist in cooperative extension through family and consumer sciences at The University of Georgia, described teaching adult family members to make quesadillas using whole wheat tortillas and low-fat cheese that they can buy in bulk (personal communication, October 3, 2007).

As is often the case in health-focused initiatives, California is proving to be a trend-setter when it comes to supporting healthier lifestyles. The mission of California Project LEAN (Leaders Encouraging Activity and Nutrition) “is to increase healthy eating and physical activity to reduce the prevalence of obesity and chronic diseases such as heart disease, cancer, stroke, osteoporosis, and diabetes” (California Project LEAN, 2007). Through their Web site (http://www.californiaprojectlean.org/), CPL provides educational and resource materials for educators, parents, public health nutritionists, and physical activity and exercise specialists.

Satcher (2005) argued that if students are to be ready to learn, health is absolutely necessary. In fact, Maslow’s (1954) hierarchy of needs places food and water as foundational, basic resources essential for our survival. In a world gone fat, we face a particular irony—poor health...
in the face of seeming abundance. To live, we must learn what to do in support of our own healthy lifestyles and those of our middle grades students. Because this journal is targeted to the adults who work with young adolescents, perhaps it will be helpful to remind us all what we are told by the flight attendants about oxygen masks: please strap on your own mask—pay attention to your needs—as you consider how best to support healthy lifestyles for students. Educators and parents are teachers, first and foremost, and we teach best by example.

References


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