Middle School Journal

January 2009 • Volume 40 • Number 3 • Pages 4-11

In Overcoming Obstacles to Curriculum Integration, L.E.S.S. Can Be More!

***This We Believe* Characteristics**

- High expectations for every member of the learning community
- Students and teachers engaged in active learning
- Curriculum that is relevant, challenging, integrative, and exploratory

*Denotes the corresponding characteristics from NMSA's position paper, *This We Believe*, for this article.

David C. Virtue, Jennifer L. Wilson, & Nikki Ingram

Integrative curriculum

Kevin stands knee-deep in the middle of a creek on a sunny October morning. Looking toward the creek bank, he holds up a wet, rusty object. "What do you think it is?" he shouts to Hector, who is kneeling in the sand filling test tubes with water samples. Kevin and Hector are engaged in an eight-week unit on the water cycle and stream ecology. They and their classmates had been concerned about the polluted conditions of a local creek, so with their teachers they developed an inquiry-based, integrative unit of study that combined class work, field study, and a service-learning component.

Integrative / Interdisciplinary curriculum

"You should start a new paragraph here," Mr. Ramsey advises. "Thanks," Taylor replies to his geography teacher, as he works on his team's written report on orangutans. One of Taylor's teammates designs a poster display across the hall in the science classroom, while another diligently works in the computer lab, trying to finish a PowerPoint presentation on orangutans before lunchtime. Taylor's teachers have designed an integrated unit on endangered species that includes a trip to the local zoo and culminates with team reports and presentations on an endangered animal.

Correlated curriculum

"Okay, class. Look at the chart on page 231 that shows monthly rainfall in Brazil. Can anyone tell me what the *average* monthly rainfall in Brazil is?" For the first time in weeks, Shannon's hand shoots up to answer the question, along with a dozen other hands. "I know this," Shannon thinks. "We're learning averages in Mr. Hooper's math class." Shannon's math and social studies teachers have decided to correlate the curriculum standards for their subjects and reinforce the same skills and concepts in both of their classes.

Conventional curriculum

The sound of the bell startles Kendall. The high-pitched drone signals the end of social studies class, and she is somewhat relieved. The bell also reminds her that math class is next. "And what are we supposed to be doing in math today?" Kendall wonders, as she tucks the half-finished social studies worksheet into her binder. Unfortunately, Kendall's experience typifies the conventional approach to curriculum in middle school classrooms throughout the United States.

The vignettes in this article represent various approaches to middle level curriculum design, each of which we have experienced as students, teachers, and teacher educators in middle school classrooms. Arnold (1997, adapting Brazee & Cappeluti, 1995) located these approaches on a continuum with conventional curriculum and integrative curriculum at opposite ends.[1] Kendall is experiencing a conventional school curriculum, in which clear boundaries exist between subject areas, and teachers make no effort to bring coherence to the curriculum. In contrast, some of Shannon's teachers are implementing a correlated curriculum, in which certain vocabulary, concepts, and skills are reinforced in multiple subjects. For Taylor and his classmates, the curricular boundaries between different subjects are blurred. They are experiencing a curriculum that may be considered interdisciplinary or integrated. Kevin and Hector's teachers joined with their students to develop an integrative learning experience. Curriculum at this level of integration will:

- Explicitly involve questions and concerns from the young people who actually carry out the unit.
- Involve widely shared, larger world concerns that are clear and compelling.
- Engage a wide range of knowledge, skills, and resources.
- Pose opportunities for in-depth and extended work.
- Present possibilities for a wide variety of activities.
- Present possibilities for personal and social action, both in school and outside school. (from Beane, 1993, p. 75)

Does Kendall not deserve the same kind of engaging, integrative learning experience that Kevin and Hector are enjoying? What would it take for Kendall's teachers to make the curriculum more coherent, more engaging, and more integrative?

Ideally, teachers have access to adequate instructional supplies and resources, the Internet and other technology, and other material support; relationships among teachers, students, and staff are positive, trusting, and collaborative; common planning time, flexible scheduling, and other structural/organizational supports are in place; and the overall school culture supports curricular innovation (e.g., Beane, 1993, 1997, 1999; DeCorse, 1996; Nesin & Lounsbury, 1999). However, Kendall's teachers may be working under conditions that are less than ideal for developing fully integrative curriculum.

We believe that any teacher or team of teachers can change or overcome these material, relational, structural/organizational, and cultural conditions that can impede curriculum integration. In this article, we share some examples of incremental steps our teams have taken to develop and implement more integrative learning experiences for our students.

Sometimes L.E.S.S. is more

The process through which teachers transform the curriculum over time is best explained by incremental change theories (Boyd, 1979; Helms, 1981). Arnold (1997) asserted that most teams accustomed to conventional curriculum will have difficulty if they attempt to begin developing curriculum at the integrative end of the continuum.

> More likely they will try only a short unit or two their first year, choosing topics that fit most easily with the conventional curriculum. As they gain confidence and experience working together, effective teams will become more flexible and enlist more student initiative and responsibility. (p. 455)

Teachers will tinker at the margins of the curriculum, effecting incremental change, until they

begin to feel comfortable with the dissolution of disciplinary boundaries, and they are willing to cede control of some curricular decisions to their students.

Curricular change does not have to be sudden or revolutionary, nor does it have to involve an entire team of teachers. Individual teachers in a single classroom and teams unaccustomed to collaborative efforts can take incremental steps toward integrative curriculum. In short, when it comes to curricular change at the middle level, sometimes *L.E.S.S.* is more. Individual teachers and teams of teachers can move toward the integrative end of the continuum by using *local*, school-based resources; by employing *emergent* curricular designs that capitalize upon teachable moments; by starting with *simple*, less complex approaches to integration; and by implementing *small*-scale integrative learning experiences within a single classroom.

Leverage the *local*

Teachers can overcome material and organizational challenges to integrative curriculum development by leveraging resources in the school or local community. While David worked in the media center at a pre-K–6 school, he had the opportunity to help the sixth grade students with their inquiry projects in science class. Each year, the sixth graders designed scientific experiments and presented their findings in a science fair format, with data displayed on colorful tri-fold boards. Students typically designed inquiry projects about things like battery longevity *(Which battery lasts longer?)*, plant growth *(Does music affect plant growth?)*, or the effectiveness of popular sports drinks *(Which sports drink gives an athlete more energy?)*.

One year, several students had difficulty formulating research questions that interested them. David asked them if they ever considered doing research about their school. He pulled books and journals from the teacher collection in the media center and showed the students how researchers study countless aspects of social settings like schools. The students were fascinated to learn that both researchers and they had the same kinds of questions about school regarding things like gender, student behavior, and instructional strategies. They designed studies to answer their own questions: *Do boys and girls engage in different kinds of play activities on the playground? Do students behave differently at different times of the day? How do students and teachers use hallway space in the school?* The students conducted authentic investigations of the social environments in their school, and they presented their findings to their classmates, parents, and teachers during the science fair.

While the school social environment can be a rich curricular resource, teachers can also guide students through interdisciplinary, field-based investigations of the natural environment on or near campus. For example, each school year, David taught his seventh grade geography students about weathering and erosion by taking a walking tour of campus to search for evidence of these physical processes. Other educators have developed local or school-based studies of watersheds (e.g., Endreny, 2007; Kenney, Militana, & Donohue, 2003; Tanner, 2001), meteorology (Kahl, Horwitz, Berg, & Gruhl, 2004), and ethnobotany (Reed, 2003).

By tapping into local resources, teachers can make the curriculum more relevant and meaningful for their students. Family and community members can be living textbooks for oral history projects (Carter, 1995; McCarthy, 2003; Wyatt, 2001). School and community needs can be catalysts for powerful service learning experiences (Bohnenberger & Terry, 2002; Harris & Harris, 2007; Kesson & Oyler, 1999; Laroder, Tippins, Handa, & Morano, 2007). Teachers should brainstorm potential curricular resources in the school and community—individuals, businesses, museums, historical sites, parks—and they should include students in this process. As Nesin and Lounsbury (1999) asserted, sometimes the search for information and instructional resources can be "a part of learning *how* to learn" (p. 20, emphasis added).

***Emergent* design**

Emergent (Jones, Evans, & Stritzel, 2001; Jones & Nimmo, 1994) or generative (Cordeiro, 1995) curriculum design is usually associated with early childhood settings; however, teachers at all grade levels may encounter opportunities to seize teachable moments and develop curriculum

generatively with their students. David was teaching seventh grade world geography when the terrorist attacks of September 11, 2001, occurred. During the weekend that followed, he was overcome with a sense of urgency about his role in helping his students understand what was happening and why it was happening. David realized that his students would grow up with the repercussions of these events, much as Cold War politics and the threat of nuclear war shaped the global climate in which his generation was raised. He spent that weekend restructuring his world geography curriculum.

David wanted his students to know the facts about 9/11 and the "War on Terrorism"—the who, the what, the where, and the when. He wanted his students to explain the aims of the United States government's War on Terrorism and to form and defend a personal position regarding these efforts. Most importantly, he wanted his students to develop an interest in the political affairs of the world in which they lived and to form the attitudes and habits of informed global citizens. His slogan was, "It's your world. Learn about it. Understand it."

David distributed the learning goals to his students early in the unit, and he explained them one by one. He also explained that they would be learning about this phenomenon together as events unfolded, and the goals would serve as a compass to guide their discovery, rather than a roadmap with a specific destination.

The unit quickly became a team-wide, correlated effort with contributions from the math, science, and language arts teachers. The unit included analysis of TV news clips; several teacher-designed WebQuests; a persuasive writing assignment that required students to defend a position related to the war in Afghanistan; and an activity that involved the use of spreadsheets to compare statistics related to quality of life (e.g, literacy rates, infant mortality) in select countries.

The tragic events of September 11 provided an opportunity for David and his team to depart from "business as usual" in their curriculum so that they could address questions that were significant and meaningful to them and to their students.

Keep it *simple*

Jen's seventh grade team wanted to move toward more integrative curriculum, but she and her colleagues had some reservations about beginning at a stage of curriculum integration in which content area lines were blurred. Instead of trying to begin at the integrative end of the curriculum continuum, they kept it simple by starting out with a "parallel design" model (Jackson & Davis, 2000, p. 51).

Jen and her teammates chose the topic survival and addressed this concept in each of the four core content areas and during advisory time. The culmination of the "Survival" unit was a three-day camping trip. During advisory time, students learned about orienteering, packing for a camping trip, knot tying, Morse code, and first aid. Each advisory group practiced campfire skits, and they met with a panel of eighth graders that had already experienced a team camping trip to learn more about what to pack and what to avoid.

In their content classes, the students explored the concept of survival in several ways. In English/language arts (ELA) the students participated in literature circles with books such as *Hatchet* (Paulsen, 1987), *Island of the Blue Dolphins* (O'Dell, 1960), *Julie of the Wolves* (George, 1972), and *A Girl Named Disaster* (Farmer, 1996). They created and maintained the seventh grade team Web site, which highlighted the unit (e.g., posting student interviews, reporting on advisory activities), and they participated in an inquiry project in which students explored survival in ways that related to their daily lives (e.g., surviving divorce, being cut from a team). In geography class, the students explored the survival skills one might need to live and travel in various foreign countries and within different cultures. The math and science teachers worked together to extend the orienteering instruction that was introduced during advisory time.

During the three-day camping trip, the students participated in night hikes, outdoor cooking, ropes courses, arts and crafts, and many other activities. They kept journals in which they recorded things they learned and memorable experiences they had. Upon returning to school, they wrote about these experiences in their ELA classes.

From a logistical standpoint, there is nothing simple about planning and managing a camping trip with 90 seventh graders. In terms of curriculum integration, however, Jen's team took a simple approach that allowed the teachers to maintain control of the curriculum in their respective content areas. By starting simply with parallel integration, Jen's team worked through some of the cultural and relational constraints of a separate subject curriculum, and they now had a basis for moving into more complex and sophisticated approaches to curriculum integration.

Start *small*

Organizational and structural constraints make interdisciplinary planning difficult or impossible for many middle school teachers. In departmentalized schools, for example, teachers often find themselves isolated. Three strategies teachers can employ in a single classroom to make their curriculum more integrative are read alouds, WebQuests, and critical literacy activities.

Reading aloud to students has long been considered an effective way to promote reading in middle grades classrooms. However, as more and more teachers explore the power of literature across the curriculum, read alouds are increasingly being viewed as a way to promote student engagement and curriculum integration (Albright & Ariail, 2005; Laminack, 2006; Richardson, 2000; Trelease, 2006). Jen recently observed a seventh grade math teacher who uses the book *The Greedy Triangle* (Burns, 1995) to introduce the characteristics of polygons and to help students see examples of polygons in everyday life. Other texts used for read alouds in middle level math classrooms include Joan Bauer's *Sticks* (1996) and Cindy Neuschwander's (1997, 1999, 2001, 2003) *Sir Cumference* series.

A sixth grade teacher who was one of David and Jen's university students uses read alouds in her science class. For example, when she teaches the standard for identifying the characteristic structures of invertebrate animals (e.g., segmented worms), she reads the book *Diary of a Worm* (Cronin, 2003). Students learn what worms eat, what they do for the environment, and how they live in a humorous yet informative way. Other read alouds aligned with this science standard are *Animals Like Us* (Mills, 2005), *Animal Fact/Animal Fable* (Seymour, 1979), and *The Insect Class* (Zabludoff, 2006).

A WebQuest is an inquiry-oriented online lesson in which students engage primarily with information from digital sources (Dodge, 1995). WebQuests have been shown to increase student engagement and motivation, raise academic achievement, and bridge the gap between electronic and print literacy (Bryand, 2005; Kahl, Horwitz, Berg, & Gruhl, 2004; Lipscomb, 2003; Reinhart, 1999; Rozema, 2004; Swindell, 2006; Wagman, 2005). The authors contend that well-planned WebQuests may also provide opportunities for teachers to integrate subject matter and to engage students in authentic, real-world problem solving.

As described earlier, David created WebQuests to teach about the events of September 11, 2001, and Jen frequently used WebQuests in her social studies class when she taught seventh grade. Jen recently observed a middle school teacher who effectively integrated the two subjects she taught, social studies and English/language arts, through WebQuests about radio shows (Windaroo State School, 2007) and U.S. Presidential elections (Schoolmaster's Delight, 2007). Through these WebQuests, students engaged in individual investigations of the electoral process, then they worked in small groups to create a radio broadcast about the upcoming Presidential election. Teachers can create their own WebQuests by using templates found at www.WebQuests.org.

Teachers in any subject area can employ critical literacy strategies, which help students explore,

interpret, and understand various types of text and media at deep levels (Johnson & Freedman, 2005; Knickerbocker & Rycik, 2006; Leland et al., 2003). Students may wrestle with issues such as power, voice, and representation as they come to better understand their own perspectives on society. Invitations are organized much like learning centers or stations; however, they are distinguished by the following features:

- Occur in social learning environments
- Focus on making meaning around one experience
- Welcome varied experiences, languages, and resources
- Represent our best current understandings
- Embrace opportunities to use multiple ways of knowing to construct and contest meaning
- Value alternative responses
- Promote the social aspects of learning by taking up issues in students' lives and placing inquiries within social contexts
- Encourage practices that reach across all dimensions of critical literacy
- Invite further inquiry. (Van Sluys, 2005, pp. 5–6)

Jen has implemented "Beauty Is in the Eye of the Beholder," an invitation in which students explore societal stereotypes of beauty and attractiveness. Students measure the features of Barbie dolls and action figures and compare them to measurements of average-sized people. They explore and deconstruct texts about body image, culture, and stereotyping, and they reflect upon their own ideals in relation to societal stereotypes.

Nikki taught critical literacy activities through a unit called "Power of Pictures," in which she used pictures from Hurricane Katrina to teach her students how to analyze images in the media. Her students learned to distinguish observations from inferences, and they studied how various forms of media use words and images to influence human behavior. Equipped with these critical literacy skills, Nikki's students extended their learning to a study of propaganda posters from World War I. Students employed the critical literacy skills they had acquired to identify and make inferences about the visible details in the posters; to deconstruct the messages they conveyed; and to evaluate the effectiveness of the propaganda.

Read alouds, WebQuests, and critical literacy strategies offer inquiry-oriented learning experiences that allow students to explore real-world issues in personal and meaningful ways. Because they can be implemented in any content area during one or two class periods, these strategies provide small ways for individual teachers to make the curriculum more coherent, more engaging, and more integrative.

Conclusion

Middle level educators need to be ever mindful of the overarching purpose of successful schools for young adolescents, which is to "enhance the healthy growth of young adolescents as lifelong learners, ethical and democratic citizens, and increasingly competent, self-sufficient young people who are optimistic about the future" (National Middle School Association, 2003, p. 1). Effective middle grades practices, such as team organization, interdisciplinary planning, advisory programs, and flexible scheduling, have been shown to support the general purpose of young adolescent schooling (Erb, 2000; Jackson & Davis, 2000), but none of these practices should be viewed as the goal or purpose, in and of itself. Moreover, the implementation of any or all of these practices does not guarantee success and, by the same token, students are not doomed to failure if their schools do not fully implement effective middle grades practices. Teachers can and should strive to develop curriculum that is relevant, challenging, integrative, and exploratory (NMSA, 2003), even under conditions that are less than ideal.

We urge teachers to remember that sometimes L.E.S.S. is more. Many challenges to curriculum integration can be overcome by using *local*, school-based resources; by employing *emergent*

curricular designs that capitalize on teachable moments; by starting with *simple* approaches to integration; and by implementing *small*-scale integrative learning experiences within a single classroom.

[1]Editor's Note

Various authors have used different terms over the years to describe the integration continuum of middle school curricula. Figure 1 is included to help readers sort out this terminology when consulting different writers on curriculum integration. Also consult the NMSA position statement on curriculum integration available at http://www.nmsa.org/AboutNMSA/PositionStatements/CurriculumIntegration/tabid/282/Default.aspx

Figure 1
Curriculum organizing principals—several views from least to most important

---

References

Albright, L. K., & Ariail, M. (2005). Tapping the potential of teacher read alouds in middle schools. *Journal of Adolescent and Adult Literacy, 48*(7), 582–592.

Arnold, J. (1997). Teams and curriculum. In T. S. Dickinson & T. O. Erb (Eds.), *We gain more than we give. Teaming in middle schools* (pp. 443–464). Columbus, OH: National Middle School Association.

Bauer, J. (1996). *Sticks.* New York: Speak.

Beane, J. A. (1993). *A middle school curriculum: From rhetoric to reality* (2nd ed.). Columbus, OH: National Middle School Association.

Beane, J. A. (1995). Introduction: What is a coherent curriculum? In J. A. Beane (Ed.), *Toward a coherent curriculum* (pp. 1–14). Alexandria, VA: Association for Supervision and Curriculum Development.

Beane, J. A. (1997). *Curriculum integration: Designing the core of democratic education*. New York: Teachers College Press.

Beane, J. A. (1999). Middle schools under siege: Responding to the attack. *Middle School Journal, 30*(5), 3–6.

Bohnenberger, J. E., & Terry, A. W. (2002). Community problem solving works for middle level students. *Middle School Journal, 34*(1), 5–12.

Boyd, W. L. (1979). The politics of curriculum change and stability. *Educational Researcher, 8*(2), 12–18.

Brazee, E. N., & Capelluti, J. (1995). *Dissolving boundaries: Toward an integrative curriculum*. Columbus, OH: National Middle School Association.

Bryand, D. A. (2005). *Using the Internet to research curriculum-based topics at the grade five level*. M.Ed. dissertation, University of Prince Edward Island, Canada. Retrieved October 10, 2007, from ProQuest Digital Dissertations database. (Publication No. AAT MR10358)

Carter, J. M. (1995). "Grandma book": Writing to discover your past. Classroom teacher's idea notebook. *Social Education, 59*(2), 92–94.

Cordeiro, P. (1995). *Endless possibilities: Generating curriculum in social studies and literacy*. Portsmouth, NH: Heinemann.

Cronin, D. (2003). *Diary of a worm*. New York: Joanna Cotler.

DeCorse, C. B. (1996). Current conversations. Teachers and the integrated curriculum: An intergenerational view. *Action in Teacher Education, 18*(1), 85–92.

Dodge, B. (1995). WebQuests: A technique for Internet-based learning. *Distance Educator, 1*(2), 10–13.

Endreny, A. (2007). Watershed seasons. *Science and Children, 44*(9), 20–25.

Erb, T. O. (1997). Thirty years of attempting to fathom teaming: Battling hairpin curves and potholes along the way. In T. S. Dickinson & T. O. Erb (Eds.), *We gain more than we give: Teaming in middle schools* (pp. 19–59). Columbus, OH: National Middle School Association.

Erb, T. O. (2000). Do middle school reforms really make a difference? *The Clearing House, 73*, 194–200. (ERIC Journal No. EJ601018)

Erb, T. O., & Doda, N. M. (1989). *Team organization: Promise—practices & possibilities*. Washington, DC: National Education Association.

Farmer, N. (1996). *A girl named disaster*. New York: Orchard Books.

George, J. C. (1972). *Julie of the wolves*. New York: HarperCollins.

Harris, M. E., & Harris, H. H. (2007). Sorting recycled trash: An activity for Earth Day. *Journal of Chemical Education, 84*(2), 207.

Helms, L. B. (1981). Policy analysis in education: The case for incrementalism. *Executive Review, 1*(6), 1–7. (ERIC Document Reproduction Service No. ED209765)

Jackson, A. W., & Davis, G. A. (2000). *Turning points 2000: Educating adolescents in the 21st century*. New York & Westerville, OH: Teachers College Press & National Middle School Association.

Jacobs, H. H. (1989). Design options for an integrated curriculum. In H. H. Jacobs (Ed.), *Interdisciplinary curriculum: Design & implementation* (pp. 13–24). Alexandria, VA: Association for Supervision and Curriculum Development.

Johnson, H., & Freedman, L. (2005). *Developing critical awareness at the middle level: Using texts as tools for critique and pleasure*. Newark, DE: International Reading Association.

Jones, E. & Nimmo, J. (1994). *Emergent curriculum*. Washington DC: National Association for the Education of Young Children.

Jones, E., Evans, K., & Stritzel, K. (2001). *The lively kindergarten: Emergent curriculum in action*. Washington DC: National Association for the Education of Young Children.

Kahl, J., Horwitz, K., Berg, C., & Gruhl, M. (2004). The quest for the perfect weather forecaster.

Science Scope, 27(7), 24–27.

Kenney, J. L., Militana, H. P., & Donohue, M. H. (2003). Helping teachers to use their school's backyard as an outdoor classroom: A report on the watershed learning center program. *Journal of Environmental Education, 35*(1), 18–26.

Kesson, K., & Oyler, C. (1999). Integrated curriculum and service learning: Linking school-based knowledge and social action. *English Education, 31*, 135–149.

Knickerbocker, J. L., & Rycik, J. A. (2006). Reexamining literature study in the middle grades: A critical response framework. *American Secondary Education, 34*(3), 43–56.

Laminack, L. (2006). *Reading aloud across the curriculum: How to build bridges in language arts, math, science, and social studies*. Portsmouth, NH: Heinemann.

Laroder, A., Tippins, D., Handa, V., & Morano, L. (2007). Rock showdown: Learning science through service with the community. *Science Scope, 30*(7), 32–37.

Leland, C. H., Harste, J. C., Davis, A., Haas, C., McDaniel, K., Parsons, M., & Strawmyer, M. (2003). "It made me hurt inside": Exploring tough social issues through critical literacy. *Journal of Reading Education, 28*(2), 7–15.

Lipscomb, G. (2003). "I guess it was pretty fun": Using WebQuest in the middle school classroom. *Clearing House, 76*(3), 152–155.

McCarthy, M. (2003). The wellspring: Historical writing project. *Academic Exchange Quarterly, 7* (2), 300–303.

Mills, A. (2005). *Animals like us*. New York: DK Publishing.

National Middle School Association. (2003). *This we believe: Developmentally responsive middle level education*, 3rd ed. Columbus, OH: Author.

National Middle School Association. (2002). NMSA Position Statement on Curriculum Integration. Retrieved October 16, 2007, from http://www.nmsa.org/AboutNMSA/PositionStatements/CurriculumIntegration/tabid/282/Default.aspx

Nesin, G., & Lounsbury, J. (1999). *Curriculum integration: Twenty questions—with answers*. Atlanta, GA: Georgia Middle School Association.

Neuschwander, C. (1997). *Sir Cumference and the first round table: A math adventure*. Watertown, MA: Charlesbridge.

Neuschwander, C. (1999). *Sir Cumference and the dragon of Pi: A math adventure*. Watertown, MA: Charlesbridge.

Neuschwander, C. (2001). *Sir Cumference and the great Knight of Angleland: A math adventure*. Watertown, MA: Charlesbridge.

Neuschwander, C. (2003). *Sir Cumference and the sword in the cone: A math adventure*. Watertown, MA: Charlesbridge.

O'Dell, S. (1960). *Island of the blue dolphins*. New York: Bantam.

Paulsen, G. (1987). *Hatchet*. New York: Simon & Schuster.

Reed, B. (2003). Right under their noses: Native plants in the schoolyard. *Northwest Education, 8* (4), 21–23.

Reinhart, J. M. (1999). *Student motivation, self-efficacy and task difficulty in Web-based instruction*. Ph.D. dissertation, Indiana University, United States–Indiana. Retrieved October 10, 2007, from ProQuest Digital Dissertations database. (Publication No. AAT 9942923)

Richardson, J. S. (2000). *Read it aloud! Using literature in the secondary content classroom*. Newark, DE: International Reading Association.

Rozema, R. A. (2004). *Electronic literacy: Teaching literary reading through the digital medium*. Ph.D. dissertation, Western Michigan University, United States–Michigan. Retrieved October 10, 2007, from ProQuest Digital Dissertations database. (Publication No. AAT 3135103)

Schoolmaster's Delight. (2007). U.S. presidential elections. Retrieved October 15, 2007, from http://www.klemmsite.de/23f9ae942509d9d0d/23f9ae94281133909/23f9ae9443129bc01.html

Schumacher, D. H. (1995). Five levels of curriculum integration defined, refined, and described. *Research in Middle Level Education, 18*(3), 73–93.

Seymour, S. (1979). *Animal fact/animal fable*. New York: Crown.

Swindell, J. W., Jr. (2006). *A case study of the use of an inquiry-based instructional strategy with rural minority at-risk, middle grade students*. Ph.D. dissertation, Mississippi State University, United States–Mississippi. Retrieved October 10, 2007, from ProQuest Digital Dissertations database. (Publication No. AAT 3211247)

Talamantes, M. L. (2006). *Computer use in context: Looking through the lens of language socialization*. Ph.D. dissertation, University of California, Riverside, United States–California. Retrieved October 10, 2007, from ProQuest Digital Dissertations database. (Publication No. AAT 3249782)

Tanner, C. K. (2001). Into the woods, wetlands, and prairies. *Educational Leadership, 58*(7), 64–66.

Trelease, J. (2006). *The read aloud handbook*. New York: Penguin.

Van Sluys, K. (2005). *What if and why? Literacy invitations for multilingual classrooms*. Portsmouth, NH: Heinemann.

Vars, G. F. (1993). *Interdisciplinary teaching: Why & how*. Columbus, OH: National Middle School Association.

Vars, G. F. (2001). Can curriculum integration survive in an era of high-stakes testing? *Middle School Journal, 33*(2), 7–17.

Wagman, J. C. (2005). *The effects of an inquiry-Internet research project on motivation, self-efficacy, and academic autonomy in heterogeneously grouped high school Latin I students*. Ph.D. dissertation, Capella University, United States–Minnesota. Retrieved October 10, 2007, from ProQuest Digital Dissertations database. (Publication No. AAT 3162731)

Windaroo State School. (2007). Webquest radio discovery. Retrieved October 15, 2007, from http://www.windarooss.qld.edu.au/WebQuests/Radio_Webquest/introduction.htm

Wyatt, F. R. (2001). Publishing biographies to learn about history, writing, and research. *Middle School Journal, 32*(5), 7–12.

Zabludoff, M. (2006). *The insect class*. New York: Marshall.

David C. Virtue, *a former middle school social studies teacher, is an assistant professor of instruction and teacher education at the University of South Carolina, Columbia. E-mail: virtue@gwm.sc.edu*

Jennifer L. Wilson, *a former middle school language arts teacher, is an assistant professor of instruction and teacher education at the University of South Carolina, Columbia. E-mail: jlwilson@gwm.sc.edu*

Nikki Ingram *teaches at North Central Middle School, Kershaw County, South Carolina.*
