School reform initiatives have always been complex, messy, and amorphous. They encompass topics ranging from school-based management to uses of technology in the classroom. Fueled by federal and state mandates targeting high expectations for all students to succeed, reform initiatives hold school systems accountable for an increasingly diverse student population. It’s no wonder that educators consider themselves at the “epicenter of a continuing tempest” (Kinsler & Gamble 2001, 3).

The history of school librarianship reveals that teacher-librarians have participated in evolving concepts of reform in education (Urbanik 1989) beginning with the Progressive movement of the early and mid-1900s, and continuing through the science and math emphasis of the post-Sputnik era, the pendulum swing back to basics in the 1980s, and the current focus on standards-based education. The school library’s participation in these movements, however, has been largely “as a reactive agent to educational change” (Carroll 1981, 22). In spite of the fact that the evidence of the relationship between high-performing schools and successful library programs has grown over the last several decades (e.g., Lance & Loertscher 2005, Lonsdale 2003, Todd & Kuhlthau 2005), general reform literature has not recognized the role of school libraries in relation to student achievement. For this reason, leaders in the field of school librarianship have urged teacher-librarians to become facilitators and leaders of education reform rather than reactors to it.

In this article, we challenge the school library community with several hard questions: How do teacher-librarians act as skilled change agents? How do they deal with educational change proactively and productively? How do they work with classroom teachers, administrators, parents, and community members to implement reform initiatives that make a difference in the lives of students? We provide responses to these questions by culling information and insights from a number of sources, notably from School Reform and the School Library Media Specialist (Hughes-Hassell & Harada 2007), the most recent title in the Principles and Practices series published by Libraries Unlimited. We begin with a description of change agentry and follow this with examples of how teacher-librarians might be proactive agents in five key reform areas: (1) building rigor in what students learn, (2) incorporating information communication technologies in the curriculum, (3) promoting evidence-based practice, (4) engaging families in literacy development, and (5) addressing the issue of diversity in our school populations.

BEING CHANGE AGENTS
What is change agentry? What do change agents do? Fullan (1993) defines change agentry as “being self-conscious about the nature of change and the change process” (12). Change agents support, assist, nurture, encourage, persuade, and push people to change, to adopt an innovation, and to use it in their daily work (Hord, Rutherford, Hulling, & Hall 2006). They act as caregivers, coaches, connectors, and catalysts (Stripling 2003). Regardless of the roles they assume, the goal of the change agent is “to fill the gaps of
expertise and to assist in charting and implementing courses of action” (Fullan & Stiegelbauer 1991, 215).

Various educators have described the characteristics or core capacities required for individuals to be effective change agents (e.g., Fullan 1993, Glickman 2002, Fullan & Stiegelbauer 1991, Fullan & Hargreaves 1991, Connor 1998, Feehan 1991). Table 1 provides a list of the most frequently mentioned characteristics.

[Table 1 Core Characteristics of Effective Change Agents]

In the remainder of this article, we sketch how teacher-librarians might display many of these characteristics as strategic players in different targets of school reform.

**BUILDING RIGOR IN LEARNING**

Rigor in the educational context refers to learning that stimulates curiosity and discovery. Such learning challenges students to engage in deeper questioning and analysis of topics, issues, and situations. It requires *teaching for understanding* that underscores “the ability to think and act flexibly with what one knows” (ALPS 2006). Understanding goes beyond comprehension. Stripling (2007) states that understanding reflects “the power of learning that a learner develops when he or she interprets, evaluates, and applies or transfers knowledge to a next context” (38). She also stresses that educators can only teach for understanding by “creating learning experiences that require the development of essential knowledge, the use of cognitive and metacognitive skills, and the application and transfer of knowledge” (38).

For this type of deep learning to occur, instructors must introduce opportunities for cognitively complex tasks to solve real problems rather than low-level, fact-gathering tasks that contribute to shallow performances. The students start with a driving question. They use multiple sources of information and learn in a social context. They are motivated to persist when teachers scaffold instruction by breaking down tasks, and use modeling, prompting, facilitation, and coaching. Students construct artifacts and performances that are representations of their findings and solutions. Importantly, content and process are not separated. As Case (2005) indicates, “thinking without content is vacuous and content acquired without thought is mindless and inert” (46). Figure 1 provides an example of how a teacher-librarian might serve as a collaborator and a connector in creating an interdisciplinary unit of study that moves “beyond superficial, activity-based instruction to deeper, constructivist approaches in which the student is expected to engage actively and thoughtfully in building meaning” (Stripling 2007, 45).

[Figure 1 Example of Teacher-Librarian’s Role in Building Rigor in Learning]

**INCORPORATING INFORMATION AND COMMUNICATION TECHNOLOGIES**
The Millennials are the newest generation with half of them already eighteen years old. Being digital natives, who assume communication to be anywhere and anytime, this generation also expects technology to be a natural part of their learning environment. It’s certainly true that they live in a world where literacy in information and communication technologies (ICT) are critical (Partnerships for 21st Century Skills 2004). Berger (2007) states:

Technologies’ ubiquitous presence is evidenced in everything we do, including the way we locate information, communicate, write, learn, shop and even socialize. It is having a significant impact on the way we live and even on the notion of an educated person. Competence with ICT is seen as a prequisite for participation in society and the workplace (112).

The ICT Literacy Panel (2002) defines digital literacy as “using digital technology, communications tools and/or networks to access, manage, integrate, evaluate and create information in order to function in a knowledge society” (10). Unquestionably, technology opens exciting avenues for accessing and producing information. Students use tools such as word processing programs, spreadsheets, and databases to outline ideas, draft reports, analyze numerical data, manage data, and organize information. They use e-mail, online forums, blogs, wikis, and chatrooms to communicate and collaborate with contacts around the world (Harada, Kirio, & Yamamoto, in press).

On a more formal level, the Internet provides access to a wealth of resources available in libraries, museums, and geographically remote research sites. Students use an ever-increasing range of software tools to produce innovative expressions of their work. Internet and digital video technologies promote collaborative activities among geographically distant students. Many of them participate in simulations or virtual worlds and work together to accomplish tasks online. Students also archive their electronic products for others to review and critique. In addition, they employ technology as a tool for assessment and evaluation, e.g., the development of electronic portfolios (Harada, Kirio, & Yamamoto, in press).

It makes good sense for teacher-librarians to be critical partners in ICT since these skills “build on the foundation of traditional literacy, research and information literacy skills, technology skills, and critical thinking skills—the core skills of the school library program” (Berger 2007, 126). Figure 2 provides a snapshot of how a teacher-librarian might function as a collaborator, a coach, and a caregiver in assisting both teachers and students in achieving a new level of literacy.

[Figure 2 Example of Teacher-Librarian’s Role in Incorporating ICT]

PROMOTING REFLECTION AND EVIDENCE-BASED PRACTICE
Reflection is a vital component of the learning and teaching processes. Being able to examine one’s own performance and actions are the first steps in self-awareness and self-regulation. As reflection becomes a natural part of the total learning experience, students realize the empowering nature of assessment. This metacognitive knowledge gives them control over their own learning. When students practice this type of thoughtful behavior,
they build essential skills and dispositions for self-directed excellence that lead to lifelong self-improvement (Jones 2006).

Reflection is not only crucial for students; it is equally critical for the teachers and library media specialists. By examining their instructional practices, professional colleagues ask deeper questions about the validity of what they teach and how they teach. They hone their skills in designing assessment techniques and using the data and student feedback to drive improvement. Effective reform efforts demand that practitioners have intimate knowledge of current research and combine this knowledge with craft wisdom (Todd 2007). The result is practice that is based on “best-available evidence” (Todd 2007, 59). Coe (1999) identifies the following as critical dimensions of evidence-based practice:

…the ability to collect, read, interpret, and integrate valid and applicable user-observed and research-derived evidence; the combining of this evidence with professional expertise, insight, experience, and leadership; and the application of this evident and wisdom to ensure significant and optimal outcomes (quoted in Todd 2007, 58).

Todd (2007) elaborates on the value of evidence-based practice in making decisions about the teacher-librarian’s instructional role:

[It] is more than getting research into practice to guide day-to-day decision-making and actions. It is also about focusing on the delivery of services based on the stated goals and objectives, systematically demonstrating outcomes and endpoints in tangible ways, and critically reflecting on inputs and processes to build an evidence-based cycle of continuous improvement…In the context of school libraries and school goals and objectives, evidence-based practice means that day-by-day work of school librarians is directed towards demonstrating the tangible impact and outcomes of services and initiatives in relation to student learning outcomes (62-63).

Action research is a tool for evidence-based practice. Ziegler (2001) defines action research as “an intentional systematic method of inquiry used by a group of practitioner-researchers who reflect and act own the real-life problems encountered in their own practice” (3). According to Gordon (2007), teacher-librarians are well suited for this type of research because the qualitative methodologies used in action research are easily integrated with everyday activities. She also maintains that the cooperative nature of the work between teachers and teacher-librarians is “ideal for the collaborative tendencies of action research” (166). Conducting this type of investigation “bolsters school librarians’ confidence and transforms their perceptions of their role from one of support to one of leadership” (Gordon 2007, 177). Figure 3 presents an example of a teacher-librarian functioning as a catalyst in conducting action research.

[Figure 3 Example of Teacher-Librarian’s Role in Action Research]
A child’s literacy development and education is dependent on the quality of the family environment and the family’s involvement in his or her learning. This type of engagement goes beyond the conventional focus on what parents do for the school, e.g., raising funds, chaperoning on field excursions, and volunteering at special events. It centers on family literacy that integrates the following activities:

- (a) interactive literacy activities between parents and their children,
- (b) training for parents regarding how to be the primary teacher for their children and full partners in the education of their children,
- (c) parent literacy training that leads to economic self-sufficiency, and
- (d) an age-appropriate education to prepare children for success in school and life experiences (National Center for Family Literacy, quoted in Mackey & Pitcher 2007, 82).

There is ample research to support the value of family literacy programs and activities (e.g., Taylor 1998; Mulhern, Rodriguez-Brown, & Shanahan 1994). “The bottom line is that families offer unique and valuable contributions to the school community; therefore, every opportunity to involve families in literacy opportunities must be considered” (Mackey & Pitcher 2007, 82). Teacher-librarians are strategically positioned to be leaders in family literacy efforts. In assuming this role, they must consider the following elements of successful programs (Griffis 2003):

- Build on literacy experiences already present in the home
- Develop instruction for children and parents that might include reading, writing, and technology skills and activities
- Provide access to information and resources that will help families become self-sufficient
- Collaborate with community partners to expand both the resources available and the range of instruction

Figure 4 describes how a teacher-librarian serves as a catalyst, caregiver, and connector, who empowers families to read and learn together.

[Figure 4 Example of Teacher-Librarian’s Role in Family Literacy Activities]

ADDRESSING DIVERSITY

Over five million students attending today’s public schools are not native English speakers; in fact, they speak over 460 different languages from cultures around the world (McElroy 2005). According to Agosto and Hughes-Hassell (2007), this substantial increase in English-language learners (ELL) means that “school library media specialists and teachers at all levels of the education system…must devote increased time and resources to supporting education for students with limited English skills” (145).

It is critical to know that a student’s linguistic background impacts “educators’ assessments of student skills [and] student comprehension of information resources” (Agosto & Hughes-Hassell 2007, 148). Just as limited English-language proficiency affects student learning, the students’ cultural rearing influence how and what they learn. The following strategies help educators to leverage rather than limit what students bring from their diverse family environments (Agosto & Hughes-Hassell 2007):
• Promote the use of multicultural and bilingual resources across the curriculum
• Help ELL students make personal connections to library resources representing unfamiliar cultures
• Establish and maintain ties with information resources and services in the community that meet the needs of ELL students

Figure 5 provides an example of how a teacher-librarian works as a connector, caregiver, and coach to make the library media center a welcoming and supportive place for all students.

[Figure 5 Example of Teacher-Librarian’s Role in Addressing Cultural Diversity]

CONCLUDING THOUGHTS
Today's climate of reform demands that teacher-librarians become advocates for students and teachers. Being an advocate means becoming a change agent and actively and thoughtfully entering the educational conversation. It means having the language and knowledge to move beyond the library media center into the wider school community. It requires familiarity with current research on teaching and learning to effectively facilitate the change process. It means carefully listening with an open mind and being responsive to teacher's concerns and questions. It means knowing how and when to communicate and whom to seek out for support. It means learning new skills to achieve the school’s vision. Finally, it means being proactive and positive. While educational change is a journey often filled with uncertainty and conflict, it is also an immensely rewarding one for students and all adult stakeholders. It is a journey worth leading.

REFERENCES


### TABLE 1 Core Characteristics of Effective Change Agents

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Moral purpose</td>
<td>Desire to make a difference in the lives of students, to contribute to the betterment of society, and to the application of democratic principles</td>
</tr>
<tr>
<td>Personal vision</td>
<td>Understanding of motivation and purpose for becoming an educator</td>
</tr>
<tr>
<td>Commitment</td>
<td>Dedication to continual improvement of self, students, and colleagues</td>
</tr>
<tr>
<td>Capacity for inquiry</td>
<td>Habit of continuous learning and reflective practice</td>
</tr>
<tr>
<td>High abstract thinking skills</td>
<td>Ability to view innovations from multiple perspectives and to generate multiple plans for implementation</td>
</tr>
<tr>
<td>Knowledge and mastery</td>
<td>Command of the content of the new practice, its purpose, and the benefits that will result from its use Understanding of the school culture</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Understanding of the benefits of collaboration to self, students, and colleagues; ability to work with others</td>
</tr>
<tr>
<td>Resiliency</td>
<td>Ability to remain flexible, focused, organized, positive, and proactive when faced with change</td>
</tr>
<tr>
<td>Interpersonal skills</td>
<td>Demonstrate the interpersonal skills needed to work effectively with people: sincere, honest, realistic, perceptive, enthusiastic, empathetic, and trustworthy</td>
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Mark and Meredith, social studies and language arts teachers at Ocean Point High School, decide to work on a project-based unit together after attending a faculty workshop on collaborative learning. Cindy, the teacher-librarian, immediately offers to help since she is familiar with the content standards in both disciplines. She has also worked well with both teachers in the past. As a member of the team, she suggests several topics that might be exciting for the students. Together, they decide on the concept of global interdependence. Knowing how busy the teachers are, Cindy also volunteers to take notes of the team’s planning meetings and send the summaries to Mark and Meredith via the school’s e-mail system.

With the students’ input, the team members formulate the overarching questions for the project and brainstorm criteria for assessing student performance. Mark decides that a major criterion for social studies is students being able to explain the impact of a specific global issue (e.g., a food crop, a disease, a trade good, a migration) in different parts of the world. In language arts and in the library, Meredith and Cindy focus on students being able to critically evaluate primary and secondary sources and select relevant information in developing their specific projects. Cindy also arranges for videoconferences with community experts on specific issues.

The instructors allow the students to select different formats for their final presentations. Cindy takes the initiative to conduct Web searches for possible project ideas and shares these creative examples with the teachers and students. Ultimately, students present their work to other classes at a culminating event staged in the library media center. Cindy also helps the students create a Web page to exchange their information with peers working on similar projects in other high schools in the state.

Harriet, the teacher-librarian at Clear Mountain Middle School, spends her summers taking courses in the use of various digital technologies. Last year, she completed a special Technology for Teaching program through the state department of education. She works closely with Sarah, the technology resource specialist at her school. They are both excited about incorporating different digital tools and software into the school program; at the same time, they realize that many of the veteran teachers are technologically challenged. Together, they plan a series of faculty training sessions on the use of tools and resources such as the digital camera, iMovie, podcasts, and wikis. In addition, Harriet offers mini-workshops on accessing information through online catalogs and primary sources available on the Internet. She and Sarah make the sessions non-threatening and fun for the faculty.

They also collaborate with the fifth grade teachers on units of study that incorporate some of these tools. While the teachers take the lead in covering the content, Harriet and Sarah support the students as they gather information, not only through text but also through symbols and visual images (i.e., graphic literacy). They assist the students in learning to navigate in the hypertext environment of the Internet and coach them through the production phase of the students’ team projects. Throughout their work, Harriet and Sarah emphasize the importance of critically analyzing information and assuming ethical responsibility for working in cyberspace.

FIGURE 3 Example of Teacher-Librarian’s Role in Action Research

Sam, a teacher-librarian at Purple Valley Elementary, invites Carolyn, a fifth grade teacher, to collaborate with him on investigating her students’ ability to distinguish between ethical and unethical uses of information. She expresses interest in doing this because she is concerned about the overall quality of her students’ research projects. They apply the following systematic process in building an evidence-based framework for their action research.

- **Read the research:** Sam takes the lead in searching online for studies that have been done in this particular area and shares them with Carolyn.

- **Focus on student learning:** Both Sam and Carolyn are concerned that students are not able to restate, summarize, or paraphrase information gleaned from various sources. They agree that students also need to understand the ethical implications of using information responsibly.

- **Employ evidence gathering strategies:** They create and administer a pre-survey that serves as a diagnostic tool. The results indicate that students have misconceptions about what constitutes plagiarism and copyright infringement. They use this data in designing a science unit on the conservation of rain forests. Sam focuses on lessons on note taking (e.g., paraphrasing and summarizing information) and creating bibliographies. Both Sam and Carolyn discuss with students the impact of plagiarism and the importance of copyright compliance. At the end of the unit, they administer a post-survey. Using the survey results and other assessment data they have gathered through the course of the unit, they compile evidence of the progress that the students have made.

- **Mesh results with other evidence in the school:** All the faculty members have been working on curriculum maps for the school year. These maps are comprehensive matrices that identify and align the following: content standards, specific learning objectives, assessment criteria and tools, and specific units of study. Carolyn incorporates the unit on rain forests in her curriculum map. Sam also documents this unit in his instructional map for the library program.

- **Disseminate evidence:** Carolyn and Sam share their collaborative research and teaching efforts at a faculty meeting. The teachers like how Carolyn has incorporated this unit in her fifth grade map of the curriculum. This motivates several of them to request Sam’s assistance with library-related instruction and assessment that they might incorporate in their respective maps.

- **Build on evidence:** Sam and Carolyn reflect on what they have learned from the action research and discuss other investigations to conduct as a team. Sam also considers ways to involve additional teachers in this type of research.

Ramon is the teacher-librarian at High Mesa Elementary. He works closely with the faculty, administrators, and community members to gather information about the students and their home life so that he might establish programs that meet their needs. He also works closely with the Parent-Community Coordinator at his school, a volunteer that works on home-school programs and activities. They collaborate on the following activities for the upcoming school year:

- **Reading night:** Families read several books from a recommended reading list to prepare for the event. They are invited to a school pizza dinner where they can informally share their views and personal experiences based on the stories they have read. By participating, families practice new skills in reading with their children.
- **Computer night:** This intergenerational activity encourages parents to learn from their children. The youngsters teach their parents the use of various software applications and Internet navigation. Ramon also invites the neighborhood public librarian to teach parents and students how to access the public library’s online access catalog.
- **Author night:** A local author is invited to read to the families and share personal experiences that inspired his or her writing. This session includes follow-up activities, e.g., a small group interaction with the author, games to win copies of the author’s book, and a literature circle where the families discuss the book.

Blue Plains High School has a culturally diverse student population: 60% of the students are Latino, 20% are African Americans, and the remaining 20% are Asian and Caucasian Americans. This is the first year at the school for Sharon, the teacher-librarian. She notes that the library media center’s resources do not adequately reflect the rich cultural diversity of the student body. Her thoughts are confirmed when she conducts an informal survey of the students regarding what they would like to see in the library collection.

She puts together an expansion plan for a culturally responsive collection that includes not only multicultural books, but a wide range of materials including newspapers from the students’ countries of birth, bilingual materials, videos, and music. In creating this plan, she collaborates with an ad hoc team comprised of teachers, students, and community members. Sharon presents her plan to the faculty, administrators, and school-community council. Everyone is impressed and supportive of her plan. The principal gives her $10,000 as seed money. The parent association contributes another $3,000. In addition, Sharon receives a $20,000 grant from a local private foundation that supports multicultural initiatives. Along with the print and multimedia collections, Sharon also builds a digital library that includes links to Web resources that are culturally relevant. For this activity, she enlists a cadre of students, who help her identify and evaluate Web sites that might be added to the school’s digital network.

Sharon also maps out a series of activities to raise everyone’s awareness about the value of cultural diversity, e.g., lunch hour literature circles with the students, a family night to involve parents and siblings, and collaborative units of study with teachers on culturally-related issues and themes.